```
Trying 31060000009999...Open

DIALOG INFORMATION SERVICES
PLEASE LOGON:
 ******** HHHHHHHH SSSSSSSS? ### Status: Signing onto Dialog ********
ENTER PASSWORD:
 ******** HHHHHHHH SSSSSSSS?  ********
### Status: Login successfulWelcome to DIALOG

Dialog level 05.11.05D

Last logoff:  08may06 15:17:30
Logon file405 11may06 14:19:11
           *** ANNOUNCEMENTS ***
                    ***
NEW FILES RELEASED
***Regulatory Affairs Journals (File 183)
***Index Chemicus (File 302)
***Inspec (File 202)

RESUMED UPDATING
***File 141, Reader's Guide Abstracts
                   ***
RELOADS COMPLETED
***File 516, D&B--Dun's Market Identifiers
***File 523, D&B European Dun's Market Identifiers
***File 531, American Business Directory
*** MEDLINE has been reloaded with the 2006 MeSH (Files 154 & 155)
*** The 2005 reload of the CLAIMS files (Files 340, 341, 942)
is now available online.
                                ***
DATABASES REMOVED
***File 196, FINDEX
***File 468, Public Opinion Online (POLL)

Chemical Structure Searching now available in Prous Science Drug
Data Report (F452), Prous Science Drugs of the Future (F453),
IMS R&D Focus (F445/955), Pharmaprojects (F128/928), Beilstein
Facts (F390), Derwent Chemistry Resource (F355) and Index Chemicus
(File 302).
                   ***
 >>>For the latest news about Dialog products, services, content<<<
 >>>and events, please visit What's New from Dialog at <<<
 >>>http://www.dialog.com/whatsnew/.  You can find news about<<<
 >>>a specific database by entering HELP NEWS <file number>.<<<
* * *
SYSTEM:HOME
Cost is in DialUnits
Menu System II: D2 version 1.7.9 term=ASCII
                     *** DIALOG HOMEBASE(SM) Main Menu ***

 Information:
  1.  Announcements (new files, reloads, etc.)
  2.  Database, Rates, & Command Descriptions
  3.  Help in Choosing Databases for Your Topic
  4.  Customer Services (telephone assistance, training, seminars, etc.)
  5.  Product Descriptions

 Connections:
  6.  DIALOG(R) Document Delivery
```

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  7.  Data Star(R)

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      /H = Help            /L = Logoff          /NOMENU = Command Mode


Enter an option number to view information or to connect to an online
 service.  Enter a BEGIN command plus a file number to search a database
(e.g., B1 for ERIC).
?
Terminal set to DLINK
                    *** DIALOG HOMEBASE(SM) Main Menu ***

 Information:
  1.  Announcements (new files, reloads, etc.)
  2.  Database, Rates, & Command Descriptions
  3.  Help in Choosing Databases for Your Topic
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 Connections:
  6.  DIALOG(R) Document Delivery
  7.  Data Star(R)

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      /H = Help            /L = Logoff          /NOMENU = Command Mode


Enter an option number to view information or to connect to an online
 service.  Enter a BEGIN command plus a file number to search a database
(e.g., B1 for ERIC).
? b 155 biosci medline

>>>"MEDLINE" is not a valid category or service name
>>>          44 is unauthorized
>>>          76 is unauthorized
>>>2 of the specified files are not available
       11may06 14:19:24 User276629 Session D226.1
            $0.00    0.211 DialUnits FileHomeBase
     $0.00  Estimated cost FileHomeBase
     $0.05  TELNET
     $0.05  Estimated cost this search
     $0.05  Estimated total session cost   0.211 DialUnits


SYSTEM:OS  - DIALOG OneSearch
  File 155:MEDLINE(R) 1951-2006/May 15
         (c) format only 2006 Dialog
  File   5:Biosis Previews(R) 1969-2006/May W1
         (c) 2006 BIOSIS
  File  24:CSA Life Sciences Abstracts 1966-2006/Apr
         (c) 2006 CSA.
  File  28:Oceanic Abstracts 1966-2006/Apr
         (c) 2006 CSA.
  File  34:SciSearch(R) Cited Ref Sci 1990-2006/Apr W5
         (c) 2006 Inst for Sci Info
  File  35:Dissertation Abs Online 1861-2006/Apr
         (c) 2006 ProQuest Info&Learning
```

```
  File  40:Enviroline(R) 1975-2006/Mar
  File  41:Pollution Abstracts 1966-2006/Apr
        (c) 2006 CSA.
  File  50:CAB Abstracts 1972-2006/Apr
        (c) 2006 CAB International
  File  65:Inside Conferences 1993-2006/May 11
        (c) 2006 BLDSC all rts. reserv.
  File  71:ELSEVIER BIOBASE 1994-2006/May W1
        (c) 2006  Elsevier Science B.V.
  File  73:EMBASE 1974-2006/May 11
        (c) 2006 Elsevier Science B.V.
  File  91:MANTIS(TM) 1880-2006/Feb
        2006 (c) Action Potential
  File  94:JICST-EPlus 1985-2006/Feb W1
        (c)2006 Japan Science and Tech Corp(JST)
  File  98:General Sci Abs 1984-2004/Dec
        (c) 2005 The HW Wilson Co.
  File 110:WasteInfo 1974-2002/Jul
        (c)  2002 AEA Techn Env.
*File 110: This file is closed (no updates)
  File 135:NewsRx Weekly Reports 1995-2006/May W1
        (c) 2006 NewsRx
  File 136:BioEngineering Abstracts 1966-2006/Apr
        (c) 2006 CSA.
  File 143:Biol. & Agric. Index 1983-2006/Apr
        (c) 2006 The HW Wilson Co
  File 144:Pascal 1973-2006/Apr W3
        (c) 2006 INIST/CNRS
  File 164:Allied & Complementary Medicine 1984-2006/May
        (c) 2006 BLHCIS
  File 172:EMBASE Alert 2006/May 11
        (c) 2006 Elsevier Science B.V.
  File 185:Zoological Record Online(R) 1978-2006/May
        (c) 2006 BIOSIS
  File 357:Derwent Biotech Res. _1982-2006/May W1
        (c) 2006 Thomson Derwent & ISI
  File 369:New Scientist 1994-2006/Sep W1
        (c) 2006 Reed Business Information Ltd.
  File 370:Science 1996-1999/Jul W3
        (c) 1999 AAAS
*File 370: This file is closed (no updates). Use File 47 for more current
information.
  File 391:Beilstein Reactions 2006/Q1
        (c) 2005 Beilstein GmbH
  File 434:SciSearch(R) Cited Ref Sci 1974-1989/Dec
        (c) 1998 Inst for Sci Info
  File 467:ExtraMED(tm) 2000/Dec
        (c) 2001 Informania Ltd.
*File 467: F467 will close on February 1, 2006.                          7.

      Set  Items  Description
      ---  -----  -----------
? s ((crystal or xtal))(30n)((antibody or antibodies))
         1385315  CRYSTAL
              39  XTAL
         2318888  ANTIBODY
         1976907  ANTIBODIES
      S1    6558  ((CRYSTAL OR XTAL))(30N)((ANTIBODY OR ANTIBODIES))
? s s1 and (mg/ml)
```

```
>>>Term "ML" is not defined in one or more files
            6558  S1
         3323964  MG/ML
      S2     156  S1 AND (MG/ML)
? rd

>>>Duplicate detection is not supported for File 391.

>>>Records from unsupported files will be retained in the RD set.
      S3      93  RD  (unique items)
? s s3 and py<=1999
Processing
Processed  10 of  29 files ...
Processing
Processed  20 of  29 files ...
>>>One or more prefixes are unsupported
>>>  or undefined in one or more files.
Processing
Completed processing all files
              93  S3
        84692606  PY<=1999
      S4      49  S3 AND PY<=1999
? t s4/ti/all
>>>No matching display code(s) found in file(s): 391
```

4/TI/1 (Item 1 from file: 155)
DIALOG(R)File 155:(c) format only 2006 Dialog. All rts. reserv.

Macromolecular docking of a three-body system: the recognition of human growth hormone by its receptor.

4/TI/2 (Item 2 from file: 155)
DIALOG(R)File 155:(c) format only 2006 Dialog. All rts. reserv.

Quantification of human lithostathine S2-5 forms using the antibody to the N-terminal peptide region.

4/TI/3 (Item 3 from file: 155)
DIALOG(R)File 155:(c) format only 2006 Dialog. All rts. reserv.

Endothelial activation in monosodium urate monohydrate crystal-induced inflammation: in vitro and in vivo studies on the roles of tumor necrosis factor alpha and interleukin-1.

4/TI/4 (Item 4 from file: 155)
DIALOG(R)File 155:(c) format only 2006 Dialog. All rts. reserv.

Expression of osteopontin, a urinary inhibitor of stone mineral crystal growth, in rat kidney.

4/TI/5 (Item 5 from file: 155)
DIALOG(R)File 155:(c) format only 2006 Dialog. All rts. reserv.

Conformational analyses on soluble and surface bound osteopontin.

4/TI/6 (Item 6 from file: 155)
DIALOG(R)File 155:(c) format only 2006 Dialog. All rts. reserv.

Nephrocalcin in patients with renal cell carcinoma.

4/TI/7 (Item 7 from file: 155)
DIALOG(R)File 155:(c) format only 2006 Dialog. All rts. reserv.

Recombinant anti-sialidase single-chain variable fragment antibody . **Characterization, formation of dimer and higher-molecular-mass multimers and the solution of the** crystal **structure of the single-chain variable fragment/sialidase complex.**

4/TI/8 (Item 8 from file: 155)
DIALOG(R)File 155:(c) format only 2006 Dialog. All rts. reserv.

Characterization of the mammalian toxicity of the crystal polypeptides of Bacillus thuringiensis subsp. israelensis.

4/TI/9 (Item 9 from file: 155)
DIALOG(R)File 155:(c) format only 2006 Dialog. All rts. reserv.

Immunocytochemical localization of pancreatic stone protein in the human digestive tract.

4/TI/10 (Item 1 from file: 5)
DIALOG(R)File 5:(c) 2006 BIOSIS. All rts. reserv.

Study of the methods for immobilization of piezoelectric immunobiosensor

4/TI/11 (Item 2 from file: 5)
DIALOG(R)File 5:(c) 2006 BIOSIS. All rts. reserv.

A NEW APPROACH TO THE DEVELOPMENT OF A REUSABLE PIEZOELECTRIC CRYSTAL BIOSENSOR

4/TI/12 (Item 3 from file: 5)
DIALOG(R)File 5:(c) 2006 BIOSIS. All rts. reserv.

DETECTION OF HUMAN TRANSFERRIN BY THE PIEZOELECTRIC CRYSTAL

4/TI/13 (Item 4 from file: 5)
DIALOG(R)File 5:(c) 2006 BIOSIS. All rts. reserv.

CHARACTERIZATION OF THE MAMMALIAN TOXICITY OF THE CRYSTAL POLYPEPTIDES OF BACILLUS-THURINGIENSIS-SSP-ISRAELENSIS

4/TI/14 (Item 5 from file: 5)
DIALOG(R)File 5:(c) 2006 BIOSIS. All rts. reserv.

AROMATIZATION OF C-19 NORSTEROID IN HUMAN PLACENTA LIVER OVARY AND ADIPOSE TISSUES

4/TI/15 (Item 1 from file: 24)
DIALOG(R)File 24:(c) 2006 CSA. All rts. reserv.

Structure at 2.7 angstrom resolution of the Paracoccus denitrificans two-subunit cytochrome c oxidase complexed with an antibody F sub(V) fragment

4/TI/16 (Item 2 from file: 24)
DIALOG(R)File 24:(c) 2006 CSA. All rts. reserv.

Sensitive titration microcalorimetric study of the binding of Salmonella O-antigenic oligosaccharides by a monoclonal antibody.

4/TI/17 (Item 3 from file: 24)
DIALOG(R)File 24:(c) 2006 CSA. All rts. reserv.

Determination of microbes and immunoglobulins using a piezoelectric biosensor.

4/TI/18 (Item 1 from file: 34)
DIALOG(R)File 34:(c) 2006 Inst for Sci Info. All rts. reserv.

Title: A new method for antibody(antigen) immobilization based on plasma-polymerized film

4/TI/19 (Item 2 from file: 34)
DIALOG(R)File 34:(c) 2006 Inst for Sci Info. All rts. reserv.

Title: Expression, purification, and structural characterization of the bacteriorhodopsin-aspartyl transcarbamylase fusion protein

4/TI/20 (Item 3 from file: 34)
DIALOG(R)File 34:(c) 2006 Inst for Sci Info. All rts. reserv.

Title: Direct determination of etofenprox using surface plasmon resonance

4/TI/21 (Item 4 from file: 34)
DIALOG(R)File 34:(c) 2006 Inst for Sci Info. All rts. reserv.

Title: Single-chain Fv of anti-idiotype 11-1G10 antibody interacts with antibody NC41 single-chain Fv with a higher affinity than the affinity for the interaction of the parent Fab fragments

4/TI/22 (Item 5 from file: 34)
DIALOG(R)File 34:(c) 2006 Inst for Sci Info. All rts. reserv.

Title: Effects of substitutions in the binding surface of an antibody on antigen affinity

4/TI/23 (Item 6 from file: 34)
DIALOG(R)File 34:(c) 2006 Inst for Sci Info. All rts. reserv.

Title: Compared structures of the free nicotinic acetylcholine receptor main immunogenic region (MIR) decapeptide and the antibody-bound [A(76)]MIR analogue: A molecular dynamics simulation from two-dimensional NMR data

4/TI/24 (Item 7 from file: 34)
DIALOG(R)File 34:(c) 2006 Inst for Sci Info. All rts. reserv.

Title: CRYSTALLIZATION OF A DEGLYCOSYLATED T-CELL RECEPTOR (TCR) COMPLEXED WITH AN ANTI-TCR FAB FRAGMENT

4/TI/25 (Item 8 from file: 34)
DIALOG(R)File 34:(c) 2006 Inst for Sci Info. All rts. reserv.

Title: A T-CELL RECEPTOR V-ALPHA DOMAIN EXPRESSED IN BACTERIA - DOES IT DIMERIZE IN SOLUTION

4/TI/26 (Item 9 from file: 34)
DIALOG(R)File 34:(c) 2006 Inst for Sci Info. All rts. reserv.

Title: ANTIBODY-DEPENDENT SIGNAL AMPLIFICATION IN TUMOR XENOGRAFTS AFTER PRETREATMENT WITH BIOTINYLATED MONOCLONAL-ANTIBODY AND AVIDIN OR STREPTAVIDIN

4/TI/27 (Item 10 from file: 34)
DIALOG(R)File 34:(c) 2006 Inst for Sci Info. All rts. reserv.

Title: INTERFERON INDUCTION OF HUMAN TRYPTOPHANYL-TRANSFER-RNA SYNTHETASE SAFEGUARDS THE SYNTHESIS OF TRYPTOPHAN-RICH IMMUNE-SYSTEM PROTEINS - A HYPOTHESIS

4/TI/28 (Item 11 from file: 34)
DIALOG(R)File 34:(c) 2006 Inst for Sci Info. All rts. reserv.

Title: CALMODULIN AS A VERSATILE TAG FOR ANTIBODY FRAGMENTS

4/TI/29 (Item 12 from file: 34)
DIALOG(R)File 34:(c) 2006 Inst for Sci Info. All rts. reserv.

Title: ADSORPTION OF ANTIBODIES TO A LANGMUIR LAYER OF OCTADECYLAMINE AND THE INTERACTION WITH ANTIGEN

4/TI/30 (Item 13 from file: 34)
DIALOG(R)File 34:(c) 2006 Inst for Sci Info. All rts. reserv.

Title: HIGH-LEVEL EXPRESSION IN ESCHERICHIA-COLI AND RAPID PURIFICATION OF ENZYMATICALLY ACTIVE HONEY-BEE VENOM PHOSPHOLIPASE-A2

4/TI/31 (Item 14 from file: 34)
DIALOG(R)File 34:(c) 2006 Inst for Sci Info. All rts. reserv.

Title: 2 APPROACHES TO THE RAPID SCREENING OF CRYSTALLIZATION CONDITIONS

4/TI/32 (Item 1 from file: 35)
DIALOG(R)File 35:(c) 2006 ProQuest Info&Learning. All rts. reserv.

TESTING THE STRUCTURAL BASIS OF THE HYHEL-5/LYSOZYME INTERACTION (SALT BRIDGE, ANTIBODIES)

4/TI/33 (Item 2 from file: 35)
DIALOG(R)File 35:(c) 2006 ProQuest Info&Learning. All rts. reserv.

CHARACTERIZATION OF AN ANTIBODY BINDING SITE BY SITE-DIRECTED MUTAGENESIS AND NUCLEAR MAGNETIC RESONANCE SPECTROSCOPY

4/TI/34 (Item 1 from file: 50)
DIALOG(R)File 50:(c) 2006 CAB International. All rts. reserv.

Development of a biosensor to identify toxins using liquid crystal membrane.

4/TI/35 (Item 1 from file: 71)
DIALOG(R)File 71:(c) 2006 Elsevier Science B.V. All rts. reserv.

Semicarbazide-sensitive amine oxidase in pig heart

4/TI/36 (Item 1 from file: 73)
DIALOG(R)File 73:(c) 2006 Elsevier Science B.V. All rts. reserv.

Microbial pest control agent: Bacillus thuringiensis

4/TI/37 (Item 1 from file: 98)
DIALOG(R)File 98:(c) 2005 The HW Wilson Co. All rts. reserv.

Piezoelectric immunosensors for urine specimens of Chlamydia trachomatis employing quartz crystal microbalance microgravimetric analyses.

4/TI/38 (Item 1 from file: 357)
DIALOG(R)File 357:(c) 2006 Thomson Derwent & ISI. All rts. reserv.

Thiolated Salmonella sp. antibody **immobilization onto the gold surface of piezoelectric quartz** crystal **- peroxidase-labeled antibody immobilization on a gold enzyme electrode for Salmonella typhimurium analysis**

4/TI/39 (Item 2 from file: 357)
DIALOG(R)File 357:(c) 2006 Thomson Derwent & ISI. All rts. reserv.

Transgenic sweet potato plants resistant to pests: field results - Agrobacterium tumefaciens-mediated Bacillus thuringiensis crystal protein cryIIIA gene transfer and transgenic plant propagation for insect resistance (conference paper)

4/TI/40 (Item 3 from file: 357)
DIALOG(R)File 357:(c) 2006 Thomson Derwent & ISI. All rts. reserv.

Development of a piezoelectric immunosensor for the detection of enterobacteria - biosensor construction with Escherichia coli antigen mouse monoclonal antibody

4/TI/41 (Item 4 from file: 357)
DIALOG(R)File 357:(c) 2006 Thomson Derwent & ISI. All rts. reserv.

Development of a piezoelectric immunosensor for the detection of Salmonella typhimurium - antibody **immobilization onto piezoelectric** crystal **; biosensor construction**

4/TI/42 (Item 5 from file: 357)
DIALOG(R)File 357:(c) 2006 Thomson Derwent & ISI. All rts. reserv.

Piezoelectric crystal biosensor modified with protein A for determination of immunoglobulins - human and mouse IgG analysis

4/TI/43 (Item 6 from file: 357)
DIALOG(R)File 357:(c) 2006 Thomson Derwent & ISI. All rts. reserv.

Expression in Escherichia coli of a cloned crystal protein gene of Bacillus thuringiensis subsp. israelensis - cloning and characterization

4/TI/44 (Item 7 from file: 357)
DIALOG(R)File 357:(c) 2006 Thomson Derwent & ISI. All rts. reserv.

Analysis of human pancreatic juice constitutents related to the pancreatic stone protein using monoclonal antibody - calcium carbonate crystal **growth-inhibitor monoclonal** antibody **preparation using hybridoma**

4/TI/45 (Item 1 from file: 370)
DIALOG(R)File 370:(c) 1999 AAAS. All rts. reserv.

Crystallographic Evidence for Preformed Dimers of Erythropoietin Receptor

Before Ligand Activation

4/TI/46 (Item 2 from file: 370)
DIALOG(R)File 370:(c) 1999 AAAS. All rts. reserv.

Immunological Origins of Binding and Catalysis in a Diels-Alderase Antibody

4/TI/47 (Item 3 from file: 370)
DIALOG(R)File 370:(c) 1999 AAAS. All rts. reserv.

Structural Insights into the Evolution of an Antibody Combining Site

4/TI/48 (Item 4 from file: 370)
DIALOG(R)File 370:(c) 1999 AAAS. All rts. reserv.

Structure of the Amino-Terminal Core Domain of the HIV-1 Capsid Protein

4/TI/49 (Item 5 from file: 370)
DIALOG(R)File 370:(c) 1999 AAAS. All rts. reserv.

The Immunological Evolution of Catalysis

```
? logoff
       11may06 14:26:59 User276629 Session D226.2
            $2.39    0.702 DialUnits File155
               $0.00  9 Type(s) in Format  6 (UDF)
            $0.00  9 Types
     $2.39  Estimated cost File155
            $4.51    0.764 DialUnits File5
               $0.00  5 Type(s) in Format  6 (UDF)
            $0.00  5 Types
     $4.51  Estimated cost File5
            $1.03    0.166 DialUnits File24
               $0.00  3 Type(s) in Format  6 (UDF)
            $0.00  3 Types
     $1.03  Estimated cost File24
            $0.21    0.034 DialUnits File28
     $0.21  Estimated cost File28
           $12.21    0.520 DialUnits File34
               $0.00  14 Type(s) in Format  6 (UDF)
            $0.00  14 Types
    $12.21  Estimated cost File34
            $0.44    0.108 DialUnits File35
               $0.00  2 Type(s) in Format  6 (UDF)
            $0.00  2 Types
     $0.44  Estimated cost File35
            $0.27    0.038 DialUnits File40
     $0.27  Estimated cost File40
            $0.19    0.030 DialUnits File41
     $0.19  Estimated cost File41
            $1.37    0.298 DialUnits File50
               $0.00  1 Type(s) in Format  6 (UDF)
            $0.00  1 Types
     $1.37  Estimated cost File50
            $1.29    0.344 DialUnits File65
     $1.29  Estimated cost File65
```

```
          $1.06    0.120 DialUnits File71
             $0.00  1 Type(s) in Format  6 (UDF)
          $0.00  1 Types
     $1.06  Estimated cost File71
          $5.45    0.486 DialUnits File73
             $0.00  1 Type(s) in Format  6 (UDF)
          $0.00  1 Types
     $5.45  Estimated cost File73
          $0.14    0.032 DialUnits File91
     $0.14  Estimated cost File91
          $0.71    0.204 DialUnits File94
     $0.71  Estimated cost File94
          $0.36    0.084 DialUnits File98
             $0.00  1 Type(s) in Format  6 (UDF)
          $0.00  1 Types
     $0.36  Estimated cost File98
          $0.16    0.028 DialUnits File110
     $0.16  Estimated cost File110
          $0.21    0.038 DialUnits File135
     $0.21  Estimated cost File135
          $0.19    0.030 DialUnits File136
     $0.19  Estimated cost File136
          $0.21    0.070 DialUnits File143
     $0.21  Estimated cost File143
          $3.26    0.724 DialUnits File144
     $3.26  Estimated cost File144
          $0.08    0.024 DialUnits File164
     $0.08  Estimated cost File164
          $0.18    0.016 DialUnits File172
     $0.18  Estimated cost File172
          $0.69    0.112 DialUnits File185
     $0.69  Estimated cost File185
          $2.19    0.098 DialUnits File357
             $0.00  7 Type(s) in Format  6 (UDF)
          $0.00  7 Types
     $2.19  Estimated cost File357
          $0.06    0.016 DialUnits File369
     $0.06  Estimated cost File369
          $0.11    0.032 DialUnits File370
             $0.00  5 Type(s) in Format  6 (UDF)
          $0.00  5 Types
     $0.11  Estimated cost File370
          $0.00    0.024 DialUnits File391
     $0.00  Estimated cost File391
         $12.92    0.550 DialUnits File434
    $12.92  Estimated cost File434
          $0.10    0.016 DialUnits File467
     $0.10  Estimated cost File467
          OneSearch, 29 files,  5.712 DialUnits FileOS
     $2.13  TELNET
    $54.12  Estimated cost this search
    $54.17  Estimated total session cost   5.922 DialUnits


Logoff: level 05.11.05 D  14:26:59


You are now logged offTrying 31060000009999...Open

DIALOG INFORMATION SERVICES
```

```
PLEASE LOGON:
 ******** HHHHHHHH SSSSSSSS? ### Status: Signing onto Dialog ********
ENTER PASSWORD:
 ******** HHHHHHHH SSSSSSSS?  ********
Welcome to DIALOG

### Status: Login successfulDialog level 05.11.05D

Last logoff:  11may06 14:26:59
Logon file405 12may06 08:26:57
           *** ANNOUNCEMENTS ***
                    ***
NEW FILES RELEASED
***Regulatory Affairs Journals (File 183)
***Index Chemicus (File 302)
***Inspec (File 202)

RESUMED UPDATING
***File 141, Reader's Guide Abstracts
                   ***
RELOADS COMPLETED
***File 516, D&B--Dun's Market Identifiers
***File 523, D&B European Dun's Market Identifiers
***File 531, American Business Directory
*** MEDLINE has been reloaded with the 2006 MeSH (Files 154 & 155)
*** The 2005 reload of the CLAIMS files (Files 340, 341, 942)
is now available online.
                                ***
DATABASES REMOVED
***File 196, FINDEX
***File 468, Public Opinion Online (POLL)

Chemical Structure Searching now available in Prous Science Drug
Data Report (F452), Prous Science Drugs of the Future (F453),
IMS R&D Focus (F445/955), Pharmaprojects (F128/928), Beilstein
Facts (F390), Derwent Chemistry Resource (F355) and Index Chemicus
(File 302).
                   ***
 >>>For the latest news about Dialog products, services, content<<<
 >>>and events, please visit What's New from Dialog at <<<
 >>>http://www.dialog.com/whatsnew/.  You can find news about<<<
 >>>a specific database by entering HELP NEWS <file number>.<<<
* * *
SYSTEM:HOME
Cost is in DialUnits
Menu System II: D2 version 1.7.9 term=ASCII
                     *** DIALOG HOMEBASE(SM) Main Menu ***

 Information:
  1.  Announcements (new files, reloads, etc.)
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  7.  Data Star(R)

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      /H = Help            /L = Logoff          /NOMENU = Command Mode


Enter an option number to view information or to connect to an online
 service.  Enter a BEGIN command plus a file number to search a database
(e.g., B1 for ERIC).
?
Terminal set to DLINK
                     *** DIALOG HOMEBASE(SM) Main Menu ***

 Information:
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  2.  Database, Rates, & Command Descriptions
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  7.  Data Star(R)

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Enter an option number to view information or to connect to an online
 service.  Enter a BEGIN command plus a file number to search a database
(e.g., B1 for ERIC).
? b 155 biosci medicine

>>>          44 is unauthorized
>>>          76 is unauthorized
>>>         138 is unauthorized
>>>3 of the specified files are not available
       12may06 08:27:05 User276629 Session D227.1
            $0.00    0.214 DialUnits FileHomeBase
     $0.00  Estimated cost FileHomeBase
     $0.03  TELNET
     $0.03  Estimated cost this search
     $0.03  Estimated total session cost   0.214 DialUnits


SYSTEM:OS  - DIALOG OneSearch
  File 155:MEDLINE(R) 1951-2006/May 16
         (c) format only 2006 Dialog
  File   5:Biosis Previews(R) 1969-2006/May W1
         (c) 2006 BIOSIS
  File  24:CSA Life Sciences Abstracts 1966-2006/Apr
         (c) 2006 CSA.
  File  28:Oceanic Abstracts 1966-2006/Apr
         (c) 2006 CSA.
  File  34:SciSearch(R) Cited Ref Sci 1990-2006/May W1
         (c) 2006 Inst for Sci Info
  File  35:Dissertation Abs Online 1861-2006/Apr
         (c) 2006 ProQuest Info&Learning
  File  40:Enviroline(R) 1975-2006/Mar
  File  41:Pollution Abstracts 1966-2006/Apr
         (c) 2006 CSA.
```

File 50:CAB Abstracts 1972-2006/Apr
(c) 2006 CAB International
File 65:Inside Conferences 1993-2006/May 11
(c) 2006 BLDSC all rts. reserv.
File 71:ELSEVIER BIOBASE 1994-2006/May W1
(c) 2006 Elsevier Science B.V.
File 73:EMBASE 1974-2006/May 12
(c) 2006 Elsevier Science B.V.
File 91:MANTIS(TM) 1880-2006/Feb
2006 (c) Action Potential
File 94:JICST-EPlus 1985-2006/Feb W1
(c)2006 Japan Science and Tech Corp(JST)
File 98:General Sci Abs 1984-2004/Dec
(c) 2005 The HW Wilson Co.
File 110:WasteInfo 1974-2002/Jul
(c) 2002 AEA Techn Env.
***File 110: This file is closed (no updates)**
File 135:NewsRx Weekly Reports 1995-2006/May W1
(c) 2006 NewsRx
File 136:BioEngineering Abstracts 1966-2006/Apr
(c) 2006 CSA.
File 143:Biol. & Agric. Index 1983-2006/Apr
(c) 2006 The HW Wilson Co
File 144:Pascal 1973-2006/Apr W3
(c) 2006 INIST/CNRS
File 164:Allied & Complementary Medicine 1984-2006/May
(c) 2006 BLHCIS
File 172:EMBASE Alert 2006/May 12
(c) 2006 Elsevier Science B.V.
File 185:Zoological Record Online(R) 1978-2006/May
(c) 2006 BIOSIS
File 357:Derwent Biotech Res. _1982-2006/May W1
(c) 2006 Thomson Derwent & ISI
File 369:New Scientist 1994-2006/Feb W4
(c) 2006 Reed Business Information Ltd.
File 370:Science 1996-1999/Jul W3
(c) 1999 AAAS
***File 370: This file is closed (no updates). Use File 47 for more current**
information.
File 391:Beilstein Reactions 2006/Q1
(c) 2005 Beilstein GmbH
File 434:SciSearch(R) Cited Ref Sci 1974-1989/Dec
(c) 1998 Inst for Sci Info
File 467:ExtraMED(tm) 2000/Dec
(c) 2001 Informania Ltd.
***File 467: F467 will close on February 1, 2006.** **7.**
File 149:TGG Health&Wellness DB(SM) 1976-2006/Apr W4
(c) 2006 The Gale Group
File 156:ToxFile 1965-2006/May W2
(c) format only 2006 Dialog
***File 156: ToxFile has resumed updating with UD20051205.**
File 159:Cancerlit 1975-2002/Oct
(c) format only 2002 Dialog
***File 159: Cancerlit is no longer updating.**
Please see HELP NEWS159.
File 162:Global Health 1983-2006/Apr
(c) 2006 CAB International
File 266:FEDRIP 2005/Dec
Comp & dist by NTIS, Intl Copyright All Rights Res

```
  File 399:CA SEARCH(R) 1967-2006/UD=14420
         (c) 2006 American Chemical Society
*File 399: Use is subject to the terms of your user/customer agreement.
IPCR/8 classification codes now searchable as IC=. See HELP NEWSIPCR.
  File 444:New England Journal of Med. 1985-2006/Apr W5
         (c) 2006 Mass. Med. Soc.

      Set  Items  Description
      ---  -----  -----------
? s (therapeutic crystal$)
      S1       0  (THERAPEUTIC CRYSTAL$)
? s (therapeutic crystal?)
      S2       0  (THERAPEUTIC CRYSTAL?)
? rd

>>>Duplicate detection is not supported for File 391.

>>>Records from unsupported files will be retained in the RD set.
      S3       0  RD  (unique items)
? s therapeutic(30n)crystal?
Processing
         4176725  THERAPEUTIC
         3874518  CRYSTAL?
      S4    5130  THERAPEUTIC(30N)CRYSTAL?
? rd

>>>Duplicate detection is not supported for File 391.

>>>Records from unsupported files will be retained in the RD set.
Processing - Examined 1200 records
Processing - Examined 3000 records
Processing - Examined 4000 records
Processing - Examined 5000 records
      S5    3491  RD  (unique items)
? s s5 and anitbod?
            3491  S5
             348  ANITBOD?
      S6       0  S5 AND ANITBOD?
? s s5 and antibod?
            3491  S5
         4023808  ANTIBOD?
      S7     238  S5 AND ANTIBOD?
? s s7 and dt=rev
>>>One or more prefixes are unsupported
>>>  or undefined in one or more files.
             238  S7
               0  DT=REV
      S8       0  S7 AND DT=REV
? s s7 and dt=review
>>>One or more prefixes are unsupported
>>>  or undefined in one or more files.
             238  S7
         3036669  DT=REVIEW
      S9      11  S7 AND DT=REVIEW
? t s9/medium/all

 9/3/1     (Item 1 from file: 155)
DIALOG(R)File 155:MEDLINE(R)
(c) format only 2006 Dialog. All rts. reserv.
```

19856445 PMID: 16381600

Mapping of the active site of proteases in the 1960s and rational design of inhibitors/drugs in the 1990s.

Schechter I

Department of Immunology, The Weizmann Institute of Science, Rehovot 76100, Israel. israel.schechter@weizmann.ac.il

Current protein & peptide science (Netherlands) Dec 2005, 6 (6) p501-12, ISSN 1389-2037--Print Journal Code: 100960529

Publishing Model Print

Document type: Journal Article; **Review**

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

9/3/2 (Item 2 from file: 155)

DIALOG(R)File 155:MEDLINE(R)

14028036 PMID: 12447901

Crystal structures of human antibodies **: a detailed and unfinished tapestry of immunoglobulin gene products.**

Ramsland Paul A; Farrugia William

Structural Biology Laboratory, The Austin Research Institute, Studley Road, Heidelberg, Victoria 3084, Australia. p.ramsland@ari.unimelb.edu.au

Journal of molecular recognition - JMR (England) Sep-Oct 2002, 15 (5) p248-59, ISSN 0952-3499--Print Journal Code: 9004580

Publishing Model Print

Document type: Journal Article; **Review**

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

9/3/3 (Item 3 from file: 155)

DIALOG(R)File 155:MEDLINE(R)

13989543 PMID: 12406063

Optimization of factor VIII replacement therapy: can structural studies help in evading antibody **inhibitors?**

Spiegel P Clint; Stoddard Barry L

Graduate Program in Biomolecular Structure and Design, University of Washington, Division of Basic Sciences, Fred Hutchinson Cancer Research Center, Seattle 98109, USA.

British journal of haematology (England) Nov 2002, 119 (2) p310-22, ISSN 0007-1048--Print Journal Code: 0372544

Contract/Grant No.: R01 HL62470; HL; NHLBI; T32 G08268; PHS

Publishing Model Print

Document type: Journal Article; **Review**

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

9/3/4 (Item 4 from file: 155)

DIALOG(R)File 155:MEDLINE(R)

(c) format only 2006 Dialog. All rts. reserv.

12455651 PMID: 10398406
Characterization of protein-glycolipid recognition at the membrane bilayer.
Evans S V; Roger MacKenzie C
Department of Biochemistry, University of Ottawa, 451 Smyth Road, Ottawa, Ontario, Canada, K1H 8M5.
Journal of molecular recognition - JMR (ENGLAND) May-Jun 1999, 12 (3) p155-68, ISSN 0952-3499--Print Journal Code: 9004580
Publishing Model Print
Document type: Journal Article; **Review**
Languages: ENGLISH
Main Citation Owner: NLM
Record type: MEDLINE; Completed

9/3/5 (Item 5 from file: 155)
DIALOG(R)File 155:MEDLINE(R)
(c) format only 2006 Dialog. All rts. reserv.

11828732 PMID: 9647865
Basic guide to the mechanisms of antiestrogen action.
MacGregor J I; Jordan V C
Robert H. Lurie Comprehensive Cancer Center, Northwestern University Medical School, Chicago, IL 60611, USA.
Pharmacological reviews (UNITED STATES) Jun 1998, 50 (2) p151-96, ISSN 0031-6997--Print Journal Code: 0421737
Contract/Grant No.: P20 CA65764; CA; NCI; RO1-CA56143; CA; NCI
Publishing Model Print
Document type: Journal Article; **Review**
Languages: ENGLISH
Main Citation Owner: NLM
Record type: MEDLINE; Completed

9/3/6 (Item 6 from file: 155)
DIALOG(R)File 155:MEDLINE(R)
(c) format only 2006 Dialog. All rts. reserv.

11000124 PMID: 8975283
[Diagnosis and therapy of chronic polyarthritis]
Diagnose und Therapie der chronischen Polyarthritis.
Leeb B F; Machold K P; Smolen J S
II. Medizinische Abteilung, Krankenhaus der Stadt Wien-Lainz, Wien.
Der Radiologe (GERMANY) Aug 1996, 36 (8) p657-62, ISSN 0033-832X--Print Journal Code: 0401257
Publishing Model Print
Document type: Journal Article; **Review** ; English Abstract
Languages: GERMAN
Main Citation Owner: NLM
Record type: MEDLINE; Completed

9/3/7 (Item 7 from file: 155)
DIALOG(R)File 155:MEDLINE(R)
(c) format only 2006 Dialog. All rts. reserv.

10982315 PMID: 8796986

Gouty arthritis and uric acid metabolism.
Wise C M; Agudelo C A
Division of Rheumatology, Allergy, and Immunology, Medical College of Virginia, Richmond 23298, USA.
Current opinion in rheumatology (UNITED STATES) May 1996, 8 (3) p248-54, ISSN 1040-8711--Print Journal Code: 9000851
Publishing Model Print; Comment in Curr Opin Rheumatol. 1996 May;8(3) 235-7; Comment in PMID 8796984
Document type: Journal Article; **Review**
Languages: ENGLISH
Main Citation Owner: NLM
Record type: MEDLINE; Completed

9/3/8 (Item 8 from file: 155)
DIALOG(R)File 155:MEDLINE(R)
(c) format only 2006 Dialog. All rts. reserv.

10338711 PMID: 7704521
Production and structure of diabodies.
Poljak R J
Center for Advanced Research in Biotechnology, University of Maryland Biotechnology Institute, Rockville 20850.
Structure (London, England) (ENGLAND) Dec 15 1994, 2 (12) p1121-3, ISSN 0969-2126--Print Journal Code: 9418985
Publishing Model Print
Document type: Journal Article; **Review**
Languages: ENGLISH
Main Citation Owner: NLM
Record type: MEDLINE; Completed

9/3/9 (Item 9 from file: 155)
DIALOG(R)File 155:MEDLINE(R)
(c) format only 2006 Dialog. All rts. reserv.

09183754 PMID: 1549384
Allergic fungal sinusitis.
Corey J P
University of Chicago, Pritzker School of Medicine, Illinois.
Otolaryngologic clinics of North America (UNITED STATES) Feb 1992, 25 (1) p225-30, ISSN 0030-6665--Print Journal Code: 0144042
Publishing Model Print
Document type: Journal Article; **Review**
Languages: ENGLISH
Main Citation Owner: NLM
Record type: MEDLINE; Completed

9/3/10 (Item 1 from file: 24)
DIALOG(R)File 24:CSA Life Sciences Abstracts
(c) 2006 CSA. All rts. reserv.

0002642686 IP ACCESSION NO: 6125823
Prion Diseases: Close to Effective Therapy?

Caughey,Byron; Cashman, Neil R

Nature Reviews: Drug Discovery, v 3, n 10, p 874-884, October 2004

PUBLICATION DATE: 2004

PUBLISHER: Nature Publishing Group, The Macmillan Building 4 Crinan Street London N1 9XW UK, [mailto:feedback@nature.com], [URL:http://www.nature.com/]

DOCUMENT TYPE: Journal Article; **Review**
RECORD TYPE: Abstract
LANGUAGE: English
SUMMARY LANGUAGE: English
ISSN: 1474-1776
FILE SEGMENT: CSA Neurosciences Abstracts

9/3/11 (Item 1 from file: 34)
DIALOG(R)File 34:SciSearch(R) Cited Ref Sci

05787934 Genuine Article#: WX516 No. References: 337
Title: Interleukin-6: Structure-function relationships
Author(s): Simpson RJ (REPRINT) ; Hammacher A; Smith DK; Matthews JM; Ward LD
Corporate Source: ROYAL MELBOURNE HOSP,LUDWIG INST CANC RES, POB 2008/MELBOURNE/VIC 3050/AUSTRALIA/ (REPRINT); WALTER & ELIZA HALL INST MED RES,/PARKVILLE/VIC 3050/AUSTRALIA/; LUDWIG INST CANC RES,MELBOURNE TUMOUR BIOL BRANCH, JOINT PROT STRUCT LAB/PARKVILLE/VIC 3050/AUSTRALIA/ ; COOPERAT RES CTR CELLULAR GROWTH FACTORS,/PARKVILLE/VIC 3050/AUSTRALIA/
Journal: PROTEIN SCIENCE, 1997, V6, N5 (MAY), P929-955
ISSN: 0961-8368 Publication date: 19970500
Publisher: CAMBRIDGE UNIV PRESS, 40 WEST 20TH STREET, NEW YORK, NY 10011-4211
Language: English Document Type: **REVIEW** (ABSTRACT AVAILABLE)
? t s9/full/all

9/9/1 (Item 1 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

19856445 PMID: 16381600
Mapping of the active site of proteases in the 1960s and rational design of inhibitors/drugs in the 1990s.
Schechter I
Department of Immunology, The Weizmann Institute of Science, Rehovot 76100, Israel. israel.schechter@weizmann.ac.il
Current protein & peptide science (Netherlands) Dec 2005, 6 (6) p501-12, ISSN 1389-2037--Print Journal Code: 100960529
Publishing Model Print
Document type: Journal Article; **Review**
Languages: ENGLISH
Main Citation Owner: NLM
Record type: MEDLINE; Completed
Subfile: INDEX MEDICUS
For several decades the specificity of proteases has been presented as an active site divided into subsites, using the nomenclature of Schechter & Berger from 1967 (S1, S2... for subsites of the active site; P1, P2... for residues of the substrate occupying the corresponding subsites). At early stages of the research (1960s) it was realized that the size of the active site was larger than expected and important interactions occur in regions

remote from the catalytic site. Since the active site was found to be large it was divided into subsites, and a procedure to map it up was developed. The map provides information on the size of the active site (number of subsites), the properties of each subsite (free energy of ligand binding, nature of binding forces, etc.), and it enables rational design of new substrates and inhibitors. Already in 1968 inhibitors with binding constants ten thousand fold higher than available inhibitors, were prepared. The model of a large active site was initially met with strong opposition. Before long, however, predictions of the model (size of the active site, interactions in subsites remote from the catalytic site) were confirmed by X-ray **crystallography** (1970). During the 1990s proteolytic enzymes received renewed attention in biology and medicine, they became **therapeutic** targets, and protease inhibitors were successfully applied in the treatment of AIDS and hypertension. The model of large active site divided into subsites, proposed 38 years ago, stood the test of time. This model is still in use in basic research to evaluate enzyme activity, and in pharmaceutical research for the development of inhibitors/drugs. (50 Refs.)

Descriptors: ***Antibodies** --chemistry--CH; *Peptide Hydrolases; *Peptide Mapping; *Protease Inhibitors--chemistry--CH; Animals; **Antibodies** --pharmacology--PD; Binding Sites; Crystallography, X-Ray; Drug Design; Peptide Hydrolases--chemistry--CH; Peptide Hydrolases--metabolism--ME; Protease Inhibitors--pharmacology--PD; Structure-Activity Relationship

CAS Registry No.: 0 (Antibodies); 0 (Protease Inhibitors)

Enzyme No.: EC 3.4.- (Peptide Hydrolases)

Record Date Created: 20051229

Record Date Completed: 20060206

9/9/2 (Item 2 from file: 155)

DIALOG(R)File 155:MEDLINE(R)

14028036 PMID: 12447901

Crystal structures of human antibodies **: a detailed and unfinished tapestry of immunoglobulin gene products.**

Ramsland Paul A; Farrugia William

Structural Biology Laboratory, The Austin Research Institute, Studley Road, Heidelberg, Victoria 3084, Australia. p.ramsland@ari.unimelb.edu.au

Journal of molecular recognition - JMR (England) Sep-Oct 2002, 15 (5) p248-59, ISSN 0952-3499--Print Journal Code: 9004580

Publishing Model Print

Document type: Journal Article; **Review**

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

Subfile: INDEX MEDICUS

Sequencing of all human immunoglobulin (Ig) germline gene segments has recently been completed. However, our first glimpses of the recombined products of this combinatorial gene system were in the 1970s, in landmark publications, reporting the crystal structures of two human myeloma proteins, the Mcg lambda light chain dimer and the New IgG1(lambda) Fab. Although numerous crystal structures of murine and human **antibodies** have now been determined, only a relatively small proportion of the human germline genes have had their corresponding protein three-dimensional structures resolved. Therefore, further structural investigations are required before the inherent diversity of the **antibody** repertoire can be fully appreciated. We discuss the detailed structural information available for human **antibodies** with regard to their immune functions. Also

discussed, is how the structural information is finding application in the 'humanization' of murine **antibodies** as part of their development as 'biopharmaceuticals' for the treatment of human disease. Copyright 2002 John Wiley & Sons, Ltd. (102 Refs.)
Descriptors: *Immunoglobulins--chemistry--CH; *Immunoglobulins--genetics --GE; Animals; **Antibodies** , Monoclonal--chemistry--CH; **Antibodies** , Monoclonal--genetics--GE; **Antibodies** , Monoclonal-- **therapeutic** use--TU; **Antibody** Diversity; Binding Sites, **Antibody** ; **Crystallography** , X-Ray; Genes, Immunoglobulin; Humans; Immunoglobulin Constant Regions--chemistry --CH; Immunoglobulin Constant Regions--genetics--GE; Immunoglobulin Variable Region--chemistry--CH; Immunoglobulin Variable Region--genetics --GE; Mice; Models, Molecular; Molecular Structure; Protein Engineering; Protein Structure, Tertiary
CAS Registry No.: 0 (Antibodies, Monoclonal); 0 (Binding Sites, Antibody); 0 (Immunoglobulin Constant Regions); 0 (Immunoglobulin Variable Region); 0 (Immunoglobulins)
Record Date Created: 20021126
Record Date Completed: 20030617

9/9/3 (Item 3 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

13989543 PMID: 12406063
Optimization of factor VIII replacement therapy: can structural studies help in evading antibody **inhibitors?**
Spiegel P Clint; Stoddard Barry L
Graduate Program in Biomolecular Structure and Design, University of Washington, Division of Basic Sciences, Fred Hutchinson Cancer Research Center, Seattle 98109, USA.
British journal of haematology (England) Nov 2002, 119 (2) p310-22, ISSN 0007-1048--Print Journal Code: 0372544
Contract/Grant No.: R01 HL62470; HL; NHLBI; T32 G08268; PHS
Publishing Model Print
Document type: Journal Article; **Review**
Languages: ENGLISH
Main Citation Owner: NLM
Record type: MEDLINE; Completed
Subfile: INDEX MEDICUS
(100 Refs.)
Tags: Male
Descriptors: *Factor VIII--therapeutic use--TU; *Hemophilia A --drug therapy--DT; Animals; Blood Coagulation Factor Inhibitors--metabolism--ME; **Crystallography** , X-Ray; Dogs; Epitopes; Factor VIII--chemistry--CH; Factor VIII--immunology--IM; Hemophilia A--immunology--IM; Humans; Mice; Mutation; Recombinant Proteins-- **therapeutic** use--TU; Research Support, U.S. Gov't, P.H.S.; Sequence Homology; Structure-Activity Relationship; Swine
CAS Registry No.: 0 (Blood Coagulation Factor Inhibitors); 0 (Epitopes); 0 (Recombinant Proteins); 9001-27-8 (Factor VIII)
Record Date Created: 20021030
Record Date Completed: 20021217

9/9/4 (Item 4 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

12455651 PMID: 10398406

Characterization of protein-glycolipid recognition at the membrane bilayer.

Evans S V; Roger MacKenzie C

Department of Biochemistry, University of Ottawa, 451 Smyth Road, Ottawa, Ontario, Canada, K1H 8M5.

Journal of molecular recognition - JMR (ENGLAND) May-Jun 1999, 12 (3) p155-68, ISSN 0952-3499--Print Journal Code: 9004580

Publishing Model Print

Document type: Journal Article; **Review**

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

Subfile: INDEX MEDICUS

A growing number of important molecular recognition events are being shown to involve the interactions between proteins and glycolipids. Glycolipids are molecules in which one or more monosaccharides are glycosidically linked to a lipid moiety. The lipid moiety is generally buried in the cell membrane or other bilayer, leaving the oligosaccharide moiety exposed but in close proximity to the bilayer surface. This presents a unique environment for protein-carbohydrate interactions, and studies to determine the influence of the bilayer on these phenomena are in their infancy. One important property of the bilayer is the ability to orient and cluster glycolipid species, as strong interactions in biological systems are often achieved through multivalency arising from the simultaneous association of two or more proteins and receptors. This is especially true of protein-carbohydrate binding because of the unusually low affinities that characterize the monovalent interactions. More recent studies have also shown that the composition of the lipid bilayer is a critical parameter in protein-glycolipid recognition. The fluidity of the bilayer allows for correct geometric positioning of the oligosaccharide head group relative to the binding sites on the protein. In addition, there are activity-based and structural data demonstrating the impact of the bilayer microenvironment on the modulation of oligosaccharide presentation. The use of model membranes in biosensor-based methods has supplied decisive evidence of the importance of the membrane in receptor presentation. These data can be correlated with three-dimensional structural information from X-ray crystallography, NMR, and molecular mechanics to provide insight into specific protein-carbohydrate inter--actions at the bilayer. Copyright 1999 National Research Council Canada and John Wiley & Sons, Ltd. (92 Refs.)

Descriptors: *Glycolipids--metabolism--ME; *Lipid Bilayers--chemistry--CH; *Membrane Lipids--metabolism--ME; *Protein Binding; **Antibodies**, Monoclonal--chemistry--CH; **Antibodies**, Monoclonal--immunology--IM; **Antibodies**, Monoclonal--metabolism--ME; **Antibodies**, Monoclonal--**therapeutic** use--TU; Antigen- **Antibody** Reactions; Bacterial Toxins--chemistry--CH; Bacterial Toxins--metabolism--ME; Binding Sites; Carbohydrate Conformation; Carbohydrate Metabolism; Carbohydrate Sequence; Carbohydrates--chemistry--CH; **Crystallography**, X-Ray; Gangliosides--chemistry--CH; Gangliosides--immunology--IM; Gangliosides--metabolism--ME; Glycolipids--chemistry--CH; Glycosphingolipids--chemistry--CH; Glycosphingolipids--metabolism--ME; Humans; Immunotherapy; Kinetics; Liposomes; Macromolecular Substances; Magnetic Resonance Spectroscopy; Melanoma--therapy--TH; Membrane Lipids--chemistry--CH; Models, Molecular; Molecular Sequence Data; Proteins--chemistry--CH; Proteins--metabolism--ME; Shiga-Like Toxin I; Structure-Activity Relationship; Substrate Specificity; Surface Plasmon Resonance; Trihexosylceramides--chemistry--CH; Trihexosylceramides--metabolism--ME

CAS Registry No.: 0 (Antibodies, Monoclonal); 0 (Bacterial Toxins); 0 (Carbohydrates); 0 (Gangliosides); 0 (Glycolipids); 0

(Glycosphingolipids); 0 (Lipid Bilayers); 0 (Liposomes); 0 (Macromolecular Substances); 0 (Membrane Lipids); 0 (Proteins); 0 (Shiga-Like Toxin I); 0 (Trihexosylceramides); 62010-37-1 (ganglioside, GD3); 71965-57-6 (globotriaosylceramide)
Record Date Created: 20000307
Record Date Completed: 20000307

9/9/5 (Item 5 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

11828732 PMID: 9647865
Basic guide to the mechanisms of antiestrogen action.
MacGregor J I; Jordan V C
Robert H. Lurie Comprehensive Cancer Center, Northwestern University Medical School, Chicago, IL 60611, USA.
Pharmacological reviews (UNITED STATES) Jun 1998, 50 (2) p151-96, ISSN 0031-6997--Print Journal Code: 0421737
Contract/Grant No.: P20 CA65764; CA; NCI; RO1-CA56143; CA; NCI
Publishing Model Print
Document type: Journal Article; **Review**
Languages: ENGLISH
Main Citation Owner: NLM
Record type: MEDLINE; Completed
Subfile: INDEX MEDICUS; Toxbib
Forty years ago, Lerner and coworkers (1958) discovered the first nonsteroidal antiestrogen and Jensen (Jensen and Jacobson, 1960) identified a target for drug action, the ER. This knowledge opened the door for the clinical development of tamoxifen which we now know provides a survival advantage in both node-positive and node-negative patients with ER-positive disease (Early Breast Cancer Trialists Collaborative Group, 1992, 1998). The drug has been studied extensively, and the results have provided an invaluable insight into possible ancillary advantages of "antiestrogens", i.e., maintenance of bone density and the prevention of coronary heart disease, and possible disadvantages, i.e., rat liver carcinogenesis and an increased risk of endometrial cancer. Most importantly, the identification of the target site-specific actions of tamoxifen caused a paradigm shift in the prospective uses of antiestrogens from a direct exploitation of the antitumor properties to the broader application as a preventative for osteoporosis, but with the beneficial side effects of preventing breast and endometrial cancer. Raloxifene, a second-generation SERM, has all the properties in the laboratory that would encourage development as a safe preventative for osteoporosis (Jordan et al., 1997). As a result, raloxifene has been evaluated in more than 11,000 postmenopausal women and found to maintain bone density with significant decreases in breast cancer incidence and no increase in endometrial thickness. Raloxifene is now available as a preventative for osteoporosis in postmenopausal women. There is every reason to believe that a multifaceted agent like raloxifene will find widespread use, and there will be continuing interest by the pharmaceutical industry in the development of new agents with even broader applications. The extensive clinical effort is augmented by past molecular innovations in the laboratory and the future promise of new discoveries. The cloning and sequencing of the ER (Green et al., 1986; Greene et al., 1986) has allowed the development of an ER knock-out mouse (Lubahn et al., 1993) that compliments Jensen's pioneering work (Jensen and Jacobson, 1962) and describes the consequences of the loss of ER alpha. However, ER beta (Kuiper et al., 1996), the second ER, has provided an additional dimension to the description of estrogen and antiestrogen action. For the future, the

development of ER beta monoclonal **antibodies** , the classification of target sites for the protein around the body, and the creation of ER beta and ER alpha, beta knock-out mice will identify new **therapeutic** targets to modulate physiological functions. Clearly, the successful **crystallization** of ER alpha with raloxifene (Brzozowski et al., 1997) must act as a stimulus for the **crystallization** of ER beta. The central issue for research on antiestrogen pharmacology is the discovery of the mechanism (or mechanisms) of target site-specificity for the modulation of estrogenic and antiestrogenic response. The description of a stimulatory pathway for antiestrogens through an AP-1 ER beta signal transduction pathway (Paech et al., 1997), although interesting, may not entirely explain the estrogenicity of antiestrogens. The model must encompass the sum of pharmacological consequences of signal transduction through ER alpha and ER beta with the simultaneous competition from endogenous estrogens at both sites. This is complicated because estradiol is an antagonist at ER beta through AP-1 sites (Paech et al., 1997), so this is clearly not the pathway for estrogen-induced bone maintenance in women. Estrogen is stimulatory through ER alpha, but antiestrogens are usually partial agonists and may either block or stimulate genes. However, we suggest that the ER alpha stimulatory pathway could be amplified through selective increases in coactivators. The principle is illustrated with the MDA-MB-231 cells stably transfected with the cDNAs for the wild-type and the amino acid 351 mutan (539 Refs.)

Descriptors: *Estrogen Antagonists--pharmacology--PD; Animals; Cell Cycle --drug effects--DE; Estrogen Antagonists--classification--CL; Estrogen Antagonists--therapeutic use--TU; Growth Substances--physiology--PH; Humans ; Receptors, Estrogen--drug effects--DE; Receptors, Estrogen--physiology --PH; Research Support, Non-U.S. Gov't; Research Support, U.S. Gov't, Non-P.H.S.; Research Support, U.S. Gov't, P.H.S.; Tamoxifen--pharmacology --PD

CAS Registry No.: 0 (Estrogen Antagonists); 0 (Growth Substances); 0 (Receptors, Estrogen); 10540-29-1 (Tamoxifen)

Record Date Created: 19980915

Record Date Completed: 19980915

9/9/6 (Item 6 from file: 155)

DIALOG(R)File 155:MEDLINE(R)

11000124 PMID: 8975283

[Diagnosis and therapy of chronic polyarthritis]

Diagnose und Therapie der chronischen Polyarthritis.

Leeb B F; Machold K P; Smolen J S

II. Medizinische Abteilung, Krankenhaus der Stadt Wien-Lainz, Wien.

Der Radiologe (GERMANY) Aug 1996, 36 (8) p657-62, ISSN 0033-832X--Print Journal Code: 0401257

Publishing Model Print

Document type: Journal Article; **Review** ; English Abstract

Languages: GERMAN

Main Citation Owner: NLM

Record type: MEDLINE; Completed

Subfile: INDEX MEDICUS

Rheumatoid arthritis (RA) is the most frequent inflammatory joint disease, and it affects about 1% of the population. The onset of arthritis is rarely acute; it is subacute and usually progresses slowly. The clinical picture of RA is variable: mild to very aggressive and destructive courses, sometimes accompanied by organ involvement, leading to severe functional impairment and early disability can be observed. RA is diagnosed according

to the ACR criteria published in 1958 and modified in 1988. The appearance of a palpable joint swelling or effusion is obligatory for the clinical diagnosis of arthritis. In RA, typically involvement of the joint of the hands and feet can be seen. Laboratory parameters play an important role as both diagnostic and prognostic tools. Besides clinical features and laboratory parameters, imaging techniques provide another cornerstone in the diagnosis of RA. Until now plain X-rays, which primarily visualize osseous changes, are the most important technique in daily practice, whereas magnetic resonance imaging and ultrasound may provide information about soft tissue changes in an earlier stage of disease. The main differential diagnoses of RA to be considered are the seronegative spondylarthropathies (psoriatic arthritis, arthritides accompanying inflammatory bowel diseases, Reiter's syndrome, and spondylitis ankylosans with peripheral arthritis), Parvovirus-induced arthritis, **crystal** -induced arthritides and septic arthritis. Early diagnosis and **therapeutic** intervention seem to be of great prognostic importance. In several independently performed investigations a higher mortality was found in RA patients than in the normal population. Drug therapy of RA consists of nonsteroidal antirheumatic drugs (NSAIDs), corticosteroids and disease-modifying drugs (DMARDs). When the functional and radiological parameters were assessed, the DMARDs were found to have a disease modifying and in rare cases a remission-inducing property. Moreover, tolerance these to drugs is limited. Newer therapeutic trials have employed substances like Tenidap, Leflunomid, bacterial extracts, antibiotics and biological subcomes (e.g., monoclonal **antibodies** against cytokines, fusion proteins for soluble cytokinereceptors). Some promising results of these investigations need confirmation in larger patient populations, but some new perspectives for a more efficacious treatment of RA can be expected. (21 Refs.)

Descriptors: *Arthritis, Rheumatoid--diagnosis--DI; *Diagnostic Imaging; Antirheumatic Agents--therapeutic use--TU; Arthritis, Rheumatoid --drug therapy--DT; Arthritis, Rheumatoid--etiology--ET; Diagnosis, Differential; English Abstract; Humans; Joints--drug effects--DE; Joints--pathology--PA

CAS Registry No.: 0 (Antirheumatic Agents)

Record Date Created: 19961227

Record Date Completed: 19961227

9/9/7 (Item 7 from file: 155)

DIALOG(R)File 155:MEDLINE(R)

10982315 PMID: 8796986

Gouty arthritis and uric acid metabolism.

Wise C M; Agudelo C A

Division of Rheumatology, Allergy, and Immunology, Medical College of Virginia, Richmond 23298, USA.

Current opinion in rheumatology (UNITED STATES) May 1996, 8 (3) p248-54, ISSN 1040-8711--Print Journal Code: 9000851

Publishing Model Print; Comment in Curr Opin Rheumatol. 1996 May;8(3) 235-7; Comment in PMID 8796984

Document type: Journal Article; **Review**

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

Subfile: INDEX MEDICUS

Important observations have continued to expand our understanding of gout. The increased risk of gout in black Americans has been linked more closely with the development of hypertension, and an increasing prevalence

in African blacks and in England may have a similar association, possibly through the use of diuretics. The association of gout and insulin resistance appears to be related to fat distribution, and the link with hyperlipidemia may be related to genetic factors. The relationship between gout and renal disease and the frequency of gout in patients with renal failure continue to be areas of controversy. The mechanism and a possible **therapeutic** approach to the hyperuricemia associated with cyclosporine therapy are better understood. The potential for **antibodies** against urate **crystals** to potentiate further **crystallization** may explain some of the uncertainties about gouty attacks. Unusual manifestations of gout, including more cases of spinal involvement, were reported. The role of formalin in dissolving urate crystals in pathologic specimens was further clarified, and the use of atomic force microscopy to detect crystals was reported. Corticosteroids are increasingly accepted in treating acute gout, and the role of colchicine in acute and intercritical gout has come under increasing scrutiny. Urate-lowering drugs appear to be cost effective in patients with more than one or two attacks per year. (54 Refs.)

Descriptors: *Arthritis, Gouty--metabolism--ME; *Uric Acid--metabolism --ME; Arthritis, Gouty--physiopathology--PP; Arthritis, Gouty--therapy--TH ; Humans

CAS Registry No.: 69-93-2 (Uric Acid)

Record Date Created: 19961121

Record Date Completed: 19961121

9/9/8 (Item 8 from file: 155)

DIALOG(R)File 155:MEDLINE(R)

10338711 PMID: 7704521

Production and structure of diabodies.

Poljak R J

Center for Advanced Research in Biotechnology, University of Maryland Biotechnology Institute, Rockville 20850.

Structure (London, England) (ENGLAND) Dec 15 1994, 2 (12) p1121-3, ISSN 0969-2126--Print Journal Code: 9418985

Publishing Model Print

Document type: Journal Article; **Review**

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

Subfile: INDEX MEDICUS

The first **crystal** structure of a diabody, a bivalent **antibody** fragment, confirms previous predicted structures and techniques for generating bispecific bivalent **antibody** fragments of considerable **therapeutic** potential. (11 Refs.)

Descriptors: *Immunoglobulin Fragments--biosynthesis--BI; Amino Acid Sequence; Binding Sites, **Antibody** ; Hybridomas; Immunoglobulin Fragments --chemistry--CH; Immunoglobulin Fragments--immunology--IM; Immunoglobulin Variable Region; Molecular Sequence Data; Protein Conformation; Research Support, Non-U.S. Gov't; Research Support, U.S. Gov't, Non-P.H.S.

CAS Registry No.: 0 (Binding Sites, Antibody); 0 (Immunoglobulin Fragments); 0 (Immunoglobulin Variable Region)

Record Date Created: 19950511

Record Date Completed: 19950511

9/9/9 (Item 9 from file: 155)

DIALOG(R)File 155:MEDLINE(R)

09183754 PMID: 1549384

Allergic fungal sinusitis.

Corey J P
University of Chicago, Pritzker School of Medicine, Illinois.

Otolaryngologic clinics of North America (UNITED STATES) Feb 1992, 25 (1) p225-30, ISSN 0030-6665--Print Journal Code: 0144042
Publishing Model Print
Document type: Journal Article; **Review**
Languages: ENGLISH
Main Citation Owner: NLM
Record type: MEDLINE; Completed
Subfile: INDEX MEDICUS

In summary, AFS is a newly recognized form of sinusitis, appearing in otherwise healthy young adults with a history of chronic bacterial or polypoid rhinosinusitis refractory to conventional therapy. Radiologic study may show patchy opacification or calcifications of the sinuses on CT. The patients have an elevated total IgE, peripheral eosinophilia, and positive skin tests for fungal antigens. They may also have elevated serum fungal allergen-specific IgE and IgG and precipitating **antibodies** to Aspergillus, Curvularia, or other fungi. Diagnostic and **therapeutic** surgical drainage of the sinuses will establish a definitive diagnosis by identifying the typical allergic mucin with eosinophils, Charcot-Leyden **crystals** , few fungal hyphae on silver stain, and a lack of tissue invasion. Treatment, other than surgical drainage, consists of systemic corticosteroids to prevent recurrence of disease. (32 Refs.)

Descriptors: *Mycoses--diagnosis--DI; *Respiratory Hypersensitivity --diagnosis--DI; *Sinusitis--diagnosis--DI; Aspergillosis--complications --CO; Aspergillosis--diagnosis--DI; Aspergillosis--therapy--TH; Diagnosis , Differential; Humans; Mycoses--complications--CO; Mycoses--therapy--TH; Respiratory Hypersensitivity--etiology--ET; Respiratory Hypersensitivity --therapy--TH; Sinusitis--etiology--ET; Sinusitis--therapy--TH
Record Date Created: 19920422
Record Date Completed: 19920422

9/9/10 (Item 1 from file: 24)

0002642686 IP ACCESSION NO: 6125823

Prion Diseases: Close to Effective Therapy?

Caughey,Byron; Cashman, Neil R

Nature Reviews: Drug Discovery, v 3, n 10, p 874-884, October 2004
PUBLICATION DATE: 2004

PUBLISHER: Nature Publishing Group, The Macmillan Building 4 Crinan Street London N1 9XW UK, [mailto:feedback@nature.com], [URL:http://www.nature.com/]

DOCUMENT TYPE: Journal Article; **Review**
RECORD TYPE: Abstract
LANGUAGE: English
SUMMARY LANGUAGE: English
ISSN: 1474-1776
DOI: 10.1038/nrd1525

FILE SEGMENT: CSA Neurosciences Abstracts

ABSTRACT:
The transmissible spongiform encephalopathies could represent a new mode of transmission for infectious diseases: a process more akin to **crystallization** than to microbial replication. The prion hypothesis proposes that the normal isoform of the prion protein is converted to a disease-specific species by template-directed misfolding. **Therapeutic** and prophylactic strategies to combat these diseases have emerged from immunological and chemotherapeutic approaches. The lessons learned in treating prion disease will almost certainly have an impact on other diseases that are characterized by the pathological accumulation of misfolded proteins. Prions represent a new class of infectious agents which propagate on a protein-only level, not requiring agent-encoded nucleic acids. Newly emergent prion diseases such as bovine spongiform encephalopathy, variant Creutzfeldt-Jakob disease (CJD), and chronic wasting disease are a source of critical concern to physicians, veterinarians, economists, politicians : and the general public. Numerous strategies and targets have been proposed for the immunotherapy of prion diseases, based on the necessity of agent replication in lymphoid tissue prion to neuro-invasion, and the sensitivity of prion propagation to **antibodies** in vitro. Prion replication in cell lines in vitro is sensitive to **antibodies** directed against the normal and abnormal isoforms of the prion protein. Numerous strategies and potential targets for treating transmissible spongiform encephalopathies have been suggested, with the most studied target being the inhibition of PrP super(Sc) accumulation. The development of higher-throughput screening assays based on scrapie-infected cell cultures have been developed and have greatly accelerated the pace of discovery of PrP super(Sc) inhibitors. Several classes of inhibitors of PrP super(Sc) formation have been identified, some of which show prophylactic activity against scrapie in rodents. However, chemotherapeutic treatments of clinically affected scrapie-infected rodents and CJD-infected humans have been largely ineffectual. Compounds that destabilize PrP super(Sc) and/or reduce scrapie infectivity have been identified that could be useful as decontaminants. The most effective therapeutic strategies might require not only the inhibition of PrP super(Sc) formation but also the reversal of TSE-associated neuropathology.

DESCRIPTORS: Prion protein; Scrapie; Transmissible spongiform encephalopathy; Disease transmission; Reviews; Creutzfeldt-Jakob disease; Lymphoid tissue; Infectious diseases; Bovine spongiform encephalopathy; Immunotherapy; Neuropathology
SUBJ CATG: 11091, Vertebrate Nervous Systems: General

9/9/11 (Item 1 from file: 34)

DIALOG(R)File 34:SciSearch(R) Cited Ref Sci

05787934 Genuine Article#: WX516 Number of References: 337
Title: Interleukin-6: Structure-function relationships
Author(s): Simpson RJ (REPRINT) ; Hammacher A; Smith DK; Matthews JM; Ward LD
Corporate Source: ROYAL MELBOURNE HOSP,LUDWIG INST CANC RES, POB 2008/MELBOURNE/VIC 3050/AUSTRALIA/ (REPRINT); WALTER & ELIZA HALL INST MED RES,/PARKVILLE/VIC 3050/AUSTRALIA/; LUDWIG INST CANC RES,MELBOURNE TUMOUR BIOL BRANCH, JOINT PROT STRUCT LAB/PARKVILLE/VIC 3050/AUSTRALIA/ ; COOPERAT RES CTR CELLULAR GROWTH FACTORS,/PARKVILLE/VIC 3050/AUSTRALIA/

Journal: PROTEIN SCIENCE, 1997, V6, N5 (MAY), P929-955
ISSN: 0961-8368 Publication date: 19970500
Publisher: CAMBRIDGE UNIV PRESS, 40 WEST 20TH STREET, NEW YORK, NY 10011-4211
Language: English Document Type: **REVIEW**
Geographic Location: AUSTRALIA
Subfile: CC LIFE--Current Contents, Life Sciences
Journal Subject Category: BIOCHEMISTRY & MOLECULAR BIOLOGY
Abstract: Interleukin-6 (IL-6) is a multifunctional cytokine that plays a central role in host defense due to its wide range of immune and hematopoietic activities and its potent ability to induce the acute phase response. Overexpression of IL-6 has been implicated in the pathology of a number of diseases including multiple myeloma, rheumatoid arthritis, Castleman's disease, psoriasis, and post-menopausal osteoporosis. Hence, selective antagonists of IL-6 action may offer therapeutic benefits. IL-6 is a member of the family of cytokines that includes interleukin-11, leukemia inhibitory factor, oncostatin M, cardiotrophin-1 and ciliary neurotrophic factor. Like the other members of this family, IL-6 induces growth or differentiation via a receptor-system that involves a specific receptor and the use of a shared signaling subunit, gp130. Identification of the regions of IL-6 that are involved in the interactions with the IL-6 receptor and gp130 is an important first step in the rational manipulation of the effects of this cytokine for therapeutic benefit. In this review, we focus on the sites on IL-6 which interact with its low-affinity specific receptor, the IL-6 receptor, and the high-affinity converter gp130. A tentative model for the IL-6 hexameric receptor ligand complex is presented and discussed with respect to the mechanism of action of the other members of the IL-6 family of cytokines.
Descriptors--Author Keywords: cytokine ; gp130 ; interleukin-6 ; receptor ; structure-function ; ternary complex
Identifiers--KeyWord Plus(R): COLONY-STIMULATING FACTOR; CILIARY NEUROTROPHIC FACTOR; LEUKEMIA INHIBITORY FACTOR; HYBRIDOMA GROWTH-FACTOR; IL-6 SIGNAL TRANSDUCER; RECOMBINANT HUMAN INTERLEUKIN-6; NUCLEAR-MAGNETIC-RESONANCE; SITE-DIRECTED MUTAGENESIS; NEUTRALIZING MONOCLONAL- **ANTIBODIES** ; 3-DIMENSIONAL SOLUTION STRUCTURE
Research Fronts: 95-0477 012 (CYTOKINE RECEPTOR SIGNALING MECHANISMS; ACTIVATION OF MULTIPLE PROTEIN-TYROSINE KINASES; STAT TRANSCRIPTION FACTORS; EARLY RESPONSE GENES)
95-0040 006 (GROWTH-HORMONE RECEPTOR; GH IN PRIMARY RAT ADIPOCYTES; CARBOXYL-TERMINAL DOMAIN)
95-1841 004 (ELEVATED SOLUBLE INTERLEUKIN-6 RECEPTOR; CASTLEMANS DISEASE; SEVERE POLYNEUROPATHY OF THE POEMS SYNDROME; GIANT LYMPH-NODE HYPERPLASIA; MYELOMA CELLS)
95-0089 002 (1.8 ANGSTROM RESOLUTION; CRYSTAL-STRUCTURE ANALYSIS OF 2 **CRYSTAL** FORMS; SECONDARY ANCHOR POSITIONS IN THE MAJOR HISTOCOMPATIBILITY COMPLEX BINDING GROOVE)
95-3294 002 (TUMOR-NECROSIS-FACTOR-ALPHA IN RHEUMATOID-ARTHRITIS; MONOCLONAL- **ANTIBODY** THERAPY; TNF ACTION; CHRONIC INFLAMMATORY DISEASE; **THERAPEUTIC** PERSPECTIVE)
95-7445 002 (INTERLEUKIN-6 (IL-6) AUTOANTIBODIES; MUCOSAL IMMUNITY; TUMOR-NECROSIS-FACTOR-ALPHA PRODUCTION IN HUMAN PERIPHERAL-BLOOD MONONUCLEAR-CELLS)
95-0323 001 (INTERLEUKIN-12 INCREASES INTERLEUKIN-4 PRODUCTION; ESTABLISHED LEISHMANIA-MAJOR INFECTION IN MICE; TH1 CELLS; CYTOKINE THERAPY)
95-0827 001 (AIDS-RELATED KAPOSIS-SARCOMA; SPINDLE CELLS; HERPESVIRUS-LIKE DNA-SEQUENCES; HUMAN-IMMUNODEFICIENCY-VIRUS TYPE-1 TAT PROTEIN)

95-1180 001 (INTERLEUKIN-1 RECEPTOR ANTAGONIST; SEPTIC SHOCK; TUMOR-NECROSIS-FACTOR IN SEPSIS)
95-1975 001 (THROMBOPOIETIN INDUCES MEGAKARYOCYTE DIFFERENTIATION; C-MPL LIGAND; IN-VITRO GROWTH OF HUMAN HEMATOPOIETIC PROGENITOR CELLS)
95-3277 001 (HUMAN-IMMUNODEFICIENCY-VIRUS INFECTION; PROINFLAMMATORY CYTOKINE EXPRESSION; IMMUNE CELLS; CIRCULATING INTERLEUKIN-6 RECEPTOR; HIV-1 DISEASE)
95-5516 001 (BONE MASS; INTERLEUKIN-6 IN POSTMENOPAUSAL WOMEN; OSTEOBLASTIC CELLS; ESTROGEN THERAPY; EXPRESSION OF CYTOKINE ACTIVITY; LOCAL FACTORS)
95-7760 001 (EXPANSION OF PRIMITIVE MURINE BONE-MARROW PROGENITOR CELLS IN-VITRO; HEMATOPOIETIC GROWTH-FACTORS; FLT3 LIGAND)
95-8716 001 (RECEPTOR TYROSINE KINASES; EPIDERMAL GROWTH-FACTOR; INTERLEUKIN-1 MODULATES PHOSPHORYLATION OF PROTEINS)

Cited References:

ABDELMEGUID SS, 1987, V86, P6434, P NATL ACAD SCI USA
AKIRA S, 1993, V54, P1, ADV IMMUNOL
ANDREWS AE, 1993, V71, P341, IMMUNOL CELL BIOL
ARCONE R, 1991, V198, P541, EUR J BIOCHEM
ARCONE R, 1991, V288, P197, FEBS LETT
BANNER DW, 1996, V380, P41, NATURE
BATAILLE R, 1989, V84, P2008, J CLIN INVEST
BAUMANN H, 1996, V157, P284, J IMMUNOL
BAUMANN H, 1994, V14, P138, MOL CELL BIOL
BAUMANN H, 1996, V93, P8374, P NATL ACAD SCI USA
BAUMANN M, 1990, V265, P19853, J BIOL CHEM
BAZAN JF, 1989, V164, P788, BIOCHEM BIOPH RES CO
BAZAN JF, 1990, V61, P753, CELL
BAZAN JF, 1990, V11, P350, IMMUNOL TODAY
BAZAN JF, 1991, V7, P197, NEURON
BAZAN JF, 1990, V87, P6934, P NATL ACAD SCI USA
BLOOM ME, 1994, V3, P279, INFECT AGENT DIS
BORK P, 1994, V242, P309, J MOL BIOL
BOULAY JL, 1993, V3, P573, CURR BIOL
BOULTON TG, 1994, V269, P11648, J BIOL CHEM
BRADLEY WG, 1993, V204, P301, P SOC EXP BIOL MED
BRAKENHOFF JPJ, 1994, V269, P86, J BIOL CHEM
BRAKENHOFF JPJ, 1987, V139, P4116, J IMMUNOL
BRAKENHOFF JPJ, 1989, V143, P1175, J IMMUNOL
BRAKENHOFF JPJ, 1990, V145, P561, J IMMUNOL
BRANDHUBER BJ, 1987, V238, P1707, SCIENCE
BREEN EC, 1990, V144, P480, J IMMUNOL
BREMS DN, 1990, V265, P5504, J BIOL CHEM
BRETON J, 1995, V227, P573, EUR J BIOCHEM
BROSH N, 1995, V270, P29594, J BIOL CHEM
CABIBBO A, 1995, V167, P41, GENE
CAYPHAS S, 1987, V139, P2965, J IMMUNOL
CHEREL M, 1995, V86, P2534, BLOOD
CHEVALIER S, 1996, V271, P14764, J BIOL CHEM
CIAPPONI L, 1995, V270, P31249, J BIOL CHEM
CLACKSON T, 1995, V267, P383, SCIENCE
CLOGSTON CL, 1989, V272, P144, ARCH BIOCHEM BIOPHYS
CONTENT J, 1982, V79, P2768, P NATL ACAD SCI USA
CONTRERAS R, 1991, V9, P378, BIO-TECHNOL
COULIE PG, 1987, V17, P1435, EUR J IMMUNOL
COULIE PG, 1989, V19, P2107, EUR J IMMUNOL
CUNNINGHAM BC, 1993, V234, P554, J MOL BIOL
CUNNINGHAM BC, 1991, V254, P821, SCIENCE
CZUPRYN MJ, 1995, V270, P978, J BIOL CHEM
DALESSANDRO F, 1993, V268, P2149, J BIOL CHEM

DANLEY DE, 1991, V283, P135, FEBS LETT
DAVIS S, 1991, V253, P59, SCIENCE
DAVIS S, 1993, V259, P1736, SCIENCE
DAVIS S, 1993, V260, P1805, SCIENCE
DEBENEDETTI F, 1994, V93, P2114, J CLIN INVEST
DEFILIPPIS V, 1996, V35, P11503, BIOCHEMISTRY-US
DEHON FD, 1995, V7, P398, CYTOKINE
DEHON FD, 1995, V369, P187, FEBS LETT
DEHON FD, 1994, V180, P2395, J EXP MED
DESERIO A, 1995, V254, P795, J MOL BIOL
DEVOS AM, 1992, V255, P306, SCIENCE
DIMARCO A, 1996, V93, P9247, P NATL ACAD SCI USA
DITTRICH E, 1994, V269, P19014, J BIOL CHEM
DITTRICH E, 1996, V271, P5487, J BIOL CHEM
DROOGMANS L, 1992, V2, P411, DNA SEQUENCE
EALICK SE, 1991, V252, P698, SCIENCE
EBRAHIMI B, 1995, V7, P232, CYTOKINE
EHLERS M, 1995, V270, P8158, J BIOL CHEM
EHLERS M, 1994, V153, P1744, J IMMUNOL
EHLERS M, 1996, V16, P569, J INTERF CYTOK RES
EISENTHAL A, 1993, V36, P101, CANCER IMMUNOL IMMUN
EKIDA T, 1992, V189, P211, BIOCHEM BIOPH RES CO
FATTORI E, 1994, V180, P1243, J EXP MED
FENG Y, 1996, V259, P524, J MOL BIOL
FENG YQ, 1995, V34, P6540, BIOCHEMISTRY-US
FIORILLO MT, 1992, V22, P799, EUR J IMMUNOL
FIORILLO MT, 1992, V22, P2609, EUR J IMMUNOL
FONTAINE V, 1993, V211, P749, EUR J BIOCHEM
FONTAINE V, 1994, V24, P1041, EUR J IMMUNOL
FONTAINE V, 1991, V104, P227, GENE
FOURCIN M, 1994, V24, P277, EUR J IMMUNOL
FOURCIN M, 1996, V271, P11756, J BIOL CHEM
FRIELING JTM, 1994, V6, P376, CYTOKINE
FUH G, 1992, V256, P1677, SCIENCE
FUKUNAGA R, 1990, V61, P341, CELL
GAILLARD JP, 1993, V23, P820, EUR J IMMUNOL
GAILLARD JP, 1996, V89, P135, J IMMUNOL
GAULDIE J, 1987, V84, P7251, P NATL ACAD SCI USA
GEARING DP, 1991, V66, P9, CELL
GEARING DP, 1993, P138, CURR OPIN HEMAT
GEARING DP, 1991, V10, P2839, EMBO J
GEARING DP, 1992, V255, P1434, SCIENCE
GEIGER T, 1988, V175, P181, EUR J BIOCHEM
GERHARTZ C, 1996, V271, P12991, J BIOL CHEM
GOITSUKA R, 1990, V144, P2599, J IMMUNOL
GOODWIN RG, 1990, V60, P941, CELL
GRENETT HE, 1991, V101, P267, GENE
GROSS V, 1989, V247, P323, FEBS LETT
GROSSMAN RM, 1989, V86, P6367, P NATL ACAD SCI USA
GUISEZ Y, 1991, V198, P217, EUR J BIOCHEM
HAEGEMAN G, 1986, V159, P625, EUR J BIOCHEM
HAMMACHER A, 1997, IN PRESS BIOMED CHRO
HAMMACHER A, 1996, V271, P5464, J BIOL CHEM
HAMMACHER A, 1994, V3, P2280, PROTEIN SCI
HARLOS K, 1994, V370, P662, NATURE
HARRIS NL, 1994, V236, P1356, J MOL BIOL
HEANEY ML, 1996, V87, P847, BLOOD
HELDIN CH, 1995, V80, P213, CELL
HELFGOTT DC, 1989, V142, P948, J IMMUNOL
HIBI M, 1990, V63, P1149, CELL

HIBI M, 1996, V74, P1, J MOL MED
HILL CP, 1993, V90, P5167, P NATL ACAD SCI USA
HILTON DJ, 1994, V13, P4765, EMBO J
HIRANO T, 1994, P145, CYTOKINE HDB
HIRANO T, 1988, V18, P1797, EUR J IMMUNOL
HIRANO T, 1986, V324, P73, NATURE
HIRANO T, 1985, V82, P5490, P NATL ACAD SCI USA
HIRAOKA O, 1995, V270, P25928, J BIOL CHEM
HIRATA Y, 1989, V143, P2900, J IMMUNOL
HIROTA H, 1995, V92, P4862, P NATL ACAD SCI USA
HOFFMAN RC, 1996, V7, P273, J BIOL NMR
HONDA M, 1990, V145, P4059, J IMMUNOL
HONDA M, 1992, V148, P2175, J IMMUNOL
HORII Y, 1989, V143, P3949, J IMMUNOL
HORIUCHI S, 1994, V24, P1945, EUR J IMMUNOL
HORSTEN U, 1995, V360, P43, FEBS LETT
HOUSSIAU FA, 1988, V31, P784, ARTHRITIS RHEUM
HUDSON KR, 1996, V271, P11971, J BIOL CHEM
IDA N, 1989, V165, P728, BIOCHEM BIOPH RES CO
IHLE JN, 1995, V77, P591, SCIENCE
IKEBUCHI K, 1987, V84, P9035, P NATL ACAD SCI USA
INOUE M, 1995, V92, P8579, P NATL ACAD SCI USA
IP NY, 1992, V69, P1121, CELL
JAMBOU RC, 1988, V85, P9426, P NATL ACAD SCI USA
JILKA RL, 1992, V257, P88, SCIENCE
KABSCH W, 1983, V22, P2577, BIOPOLYMERS
KALAI M, 1996, V238, P714, EUR J BIOCHEM
KAWANO M, 1988, V332, P83, NATURE
KESTLER DP, 1995, V86, P4559, BLOOD
KING DP, 1996, V43, P190, IMMUNOGENETICS
KISHIMOTO T, 1994, V76, P253, CELL
KISHIMOTO T, 1992, V258, P593, SCIENCE
KLEIN B, 1991, V78, P1198, BLOOD
KLEIN B, 1995, V85, P863, BLOOD
KLEIN B, 1995, V16, P216, IMMUNOL TODAY
KOPF M, 1994, V368, P339, NATURE
KRAKAUER T, 1992, V52, P415, J LEUKOCYTE BIOL
KRAULIS PJ, 1991, V24, P946, J APPL CRYSTALLOGR
KRUTTGEN A, 1995, V309, P215, BIOCHEM J
KRUTTGEN A, 1990, V262, P323, FEBS LETT
KRUTTGEN A, 1990, V273, P95, FEBS LETT
KUKIELKA GL, 1994, V723, P258, ANN NY ACAD SCI
LARSEN A, 1990, V172, P1559, J EXP MED
LAYTON JE, 1991, V266, P23815, J BIOL CHEM
LAYTON JE, 1993, V12, P327, LYMPHOKINE CYTOK RES
LAYTON MJ, 1994, V269, P29891, J BIOL CHEM
LEEBEEK FWG, 1992, V306, P262, FEBS LETT
LEEBEEK FWG, 1992, V267, P14832, J BIOL CHEM
LEUNG DW, 1987, V330, P537, NATURE
LEUTZ A, 1989, V8, P175, EMBO J
LEVY Y, 1991, V88, P696, J CLIN INVEST
LI XM, 1993, V268, P22377, J BIOL CHEM
LIAUTARD J, 1994, V5, P293, EUR CYTOKINE NETW
LIU J, 1992, V267, P16763, J BIOL CHEM
LIU Y, 1994, V152, P1821, J IMMUNOL
LIVNAH O, 1996, V273, P464, SCIENCE
LOVEJOY B, 1993, V234, P640, J MOL BIOL
LOWMAN HB, 1993, V234, P564, J MOL BIOL
LU HS, 1989, V268, P81, ARCH BIOCHEM BIOPHYS
LU ZY, 1993, V5, P578, CYTOKINE

LU ZY, 1992, V22, P2819, EUR J IMMUNOL
LUST JA, 1992, V4, P96, CYTOKINE
LUTTICKEN C, 1991, V282, P265, FEBS LETT
LUTTICKEN C, 1994, V263, P89, SCIENCE
MACKIEWICZ A, 1992, V149, P2021, J IMMUNOL
MARTIN F, 1996, V255, P86, J MOL BIOL
MATSUURA Y, 1989, V557, P122, ANN NY ACAD SCI
MATTHEWS JM, 1997, IN PRESS BIOCHEMISTR
MAY LT, 1989, V557, P114, ANN NY ACAD SCI
MAY LT, 1988, V152, P1144, BIOCHEM BIOPH RES CO
MAY LT, 1989, V159, P991, BIOCHEM BIOPH RES CO
MAY LT, 1991, V3, P204, CYTOKINE
MAY LT, 1988, V263, P7760, J BIOL CHEM
MAY LT, 1991, V266, P9950, J BIOL CHEM
MCDONALD NQ, 1995, V14, P2689, EMBO J
MCKAY DB, 1992, V257, P412, SCIENCE
METCALF D, 1993, V82, P3515, BLOOD
MILBURN MV, 1993, V363, P172, NATURE
MILES SA, 1990, V87, P4068, P NATL ACAD SCI USA
MIYAJIMA A, 1992, V17, P378, TRENDS BIOCHEM SCI
MOCK BA, 1989, V142, P1372, J IMMUNOL
MORTON CJ, 1995, V1249, P189, BBA-PROTEIN STRUCT M
MORTON CJ, 1994, V219, P97, EUR J BIOCHEM
MOSLEY B, 1996, V271, P32635, J BIOL CHEM
MOTT HR, 1995, V5, P114, CURR OPIN STRUC BIOL
MOTT HR, 1995, V247, P979, J MOL BIOL
MULLBERG J, 1993, V332, P174, FEBS LETT
MULLER T, 1994, V237, P423, J MOL BIOL
MULLER T, 1995, V247, P360, J MOL BIOL
MULLER YA, 1996, V256, P144, J MOL BIOL
MURAKAMI M, 1991, V88, P11349, P NATL ACAD SCI USA
MURAKAMI M, 1993, V260, P1808, SCIENCE
NAKAJIMA K, 1989, V142, P144, J IMMUNOL
NARAZAKI M, 1993, V82, P1120, BLOOD
NARAZAKI M, 1994, P56, GUIDEBOOK CYTOKINES
NEDDERMANN P, 1996, V271, P30986, J BIOL CHEM
NESBITT JE, 1992, V267, P5739, J BIOL CHEM
NICOLA NA, 1989, V58, P45, ANNU REV BIOCHEM
NICOLA NA, 1994, P1, GUIDEBOOK CYTOKINES
NISHIMURA C, 1996, V35, P273, BIOCHEMISTRY-US
NISHIMURA C, 1990, V1041, P243, BIOCHIM BIOPHYS ACTA
NISHIMURA C, 1991, V196, P377, EUR J BIOCHEM
NISHIMURA C, 1991, V281, P167, FEBS LETT
NISHIMURA C, 1992, V311, P271, FEBS LETT
NORDAN RP, 1987, V139, P813, J IMMUNOL
NORTHEMANN W, 1989, V264, P16072, J BIOL CHEM
NOVICK D, 1991, V10, P137, HYBRIDOMA
NOVICK D, 1989, V170, P1409, J EXP MED
OHASHI T, 1989, V46, P501, J LEUKOCYTE BIOL
OHASHI T, 1993, V55, P941, J VET MED SCI
ORITA T, 1994, V115, P345, J BIOCHEM-TOKYO
PANAYOTATOS N, 1995, V270, P14007, J BIOL CHEM
PANDIT J, 1992, V258, P1358, SCIENCE
PAONESSA G, 1995, V14, P1942, EMBO J
PARRY DAD, 1988, V1, P107, J MOL RECOG
PARRY DAD, 1991, V4, P63, J MOL RECOGNIT
PENNICA D, 1995, V270, P10915, J BIOL CHEM
POLI G, 1990, V172, P151, J EXP MED
POLI V, 1994, V13, P1189, EMBO J
POWERS R, 1993, V32, P6744, BIOCHEMISTRY-US

POWERS R, 1992, V256, P1673, SCIENCE
PRESNELL SR, 1989, V86, P6592, P NATL ACAD SCI USA
PROUDFOOT AEI, 1993, V12, P489, J PROTEIN CHEM
RADHAKRISHNAN R, 1996, V4, P1453, STRUCTURE
RAMSAY AJ, 1994, V264, P561, SCIENCE
REDFIELD C, 1994, V238, P23, J MOL BIOL
REIDHAAROLSON JF, 1996, V35, P9034, BIOCHEMISTRY-US
RENAULD JC, 1992, V89, P5690, P NATL ACAD SCI USA
RICHARDS CD, 1991, V3, P269, CYTOKINE
ROBINSON RC, 1994, V77, P1101, CELL
ROBLEDO O, 1996, V7, P614, EUR CYT NETW
ROCK FL, 1994, V33, P5146, BIOCHEMISTRY-US
ROSEJOHN S, 1994, V300, P281, BIOCHEM J
ROZWARSKI DA, 1996, V26, P304, PROTEINS
ROZWARSKI DA, 1994, V2, P159, STRUCTURE
SAGGIO I, 1995, V14, P3045, EMBO J
SAITO M, 1992, V148, P4066, J IMMUNOL
SAITO T, 1993, V163, P217, J IMMUNOL METHODS
SALVATI AL, 1995, V270, P12242, J BIOL CHEM
SAMUDZI CT, 1993, V49, P513, ACTA CRYSTALLOGR D
SAMUDZI CT, 1991, V266, P21791, J BIOL CHEM
SAVINO R, 1994, V13, P1357, EMBO J
SAVINO R, 1994, V13, P5863, EMBO J
SAVINO R, 1993, V90, P4067, P NATL ACAD SCI USA
SCHINDLER C, 1995, V64, P621, ANN REV BIOCH
SEHGAL PB, 1986, V83, P5219, P NATL ACAD SCI USA
SENDA T, 1995, V253, P187, J MOL BIOL
SHIMAMURA T, 1991, V28, P1155, MOL IMMUNOL
SIMPSON RJ, 1988, V157, P364, BIOCHEM BIOPH RES CO
SIMPSON RJ, 1988, V176, P187, EUR J BIOCHEM
SNOUWAERT JN, 1991, V266, P23097, J BIOL CHEM
SNOUWAERT JN, 1991, V146, P585, J IMMUNOL
SOMERS W, 1994, V372, P478, NATURE
SPORENO E, 1996, V87, P4510, BLOOD
SPORENO E, 1994, V269, P10991, J BIOL CHEM
SPRANG SR, 1993, V3, P815, CURR OPIN STRUC BIOL
STAHL N, 1994, V263, P92, SCIENCE
STAHL N, 1995, V267, P1349, SCIENCE
STOYAN T, 1993, V216, P239, EUR J BIOCHEM
SUGITA T, 1990, V171, P2001, J EXP MED
SUNDSTROM M, 1996, V271, P32197, J BIOL CHEM
SYNERS L, 1989, V557, P388, ANN NY ACAD SCI
TAGA T, 1989, V58, P573, CELL
TAGA T, 1987, V166, P967, J EXP MED
TAGA T, 1996, V67, P1, J NEUROCHEM
TAGA T, 1992, V89, P10998, P NATL ACAD SCI USA
TAKAI Y, 1988, V140, P508, J IMMUNOL
TANABE O, 1988, V141, P3875, J IMMUNOL
TANIGUCHI T, 1995, V268, P251, SCIENCE
TARTAGLIA LA, 1995, V83, P1263, CELL
THIER M, 1995, V40, P826, J NEUROSCI RES
THOREAU E, 1991, V282, P26, FEBS LETT
TONIATTI C, 1996, V15, P2726, EMBO J
TONOUCHI N, 1988, V104, P30, J BIOCH
TROWBRIDGE IS, 1993, V9, P129, ANNU REV CELL BIOL
ULLRICH A, 1990, V61, P203, CELL
ULLRICH MH, 1994, V236, P286, J MOL BIOL
VANDAM M, 1993, V268, P15285, J BIOL CHEM
VANDAMME J, 1987, V168, P543, EUR J BIOCHEM
VANDAMME J, 1988, V140, P1534, J IMMUNOL

VANSNICK J, 1990, V8, P253, ANNU REV IMMUNOL
VANSNICK J, 1988, V18, P193, EUR J IMMUNOL
VANSNICK J, 1987, V165, P641, J EXP MED
VANSNICK J, 1986, V83, P9679, P NATL ACAD SCI USA
VAUGHN DE, 1996, V16, P261, NEURON
VIGON I, 1992, V89, P5640, P NATL ACAD SCI USA
VILLINGER F, 1995, V155, P3946, J IMMUNOL
VOSS SD, 1994, P31, GUIDEBOOK CYTOKINES
WAAGE A, 1989, V169, P333, J EXP MED
WALTER MR, 1995, V34, P12118, BIOCHEMISTRY-US
WALTER MR, 1992, V267, P20371, J BIOL CHEM
WALTER MR, 1992, V224, P1075, J MOL BIOL
WALTER MR, 1995, V376, P230, NATURE
WANG Y, 1992, V14, P666, GENOMICS
WANG Y, 1995, V57, P610, J CELL BIOCHEM
WARD LD, 1995, V34, P2901, BIOCHEMISTRY-US
WARD LD, 1995, V269, P23286, BIOCHEMISTRY-US
WARD LD, 1994, V269, P23286, J BIOL CHEM
WARD LD, 1996, V271, P20138, J BIOL CHEM
WARD LD, 1993, V2, P1291, PROTEIN SCI
WARD LD, 1993, V2, P1472, PROTEIN SCI
WARD LD, 1994, V5, P331, TECHNIQUES PROTEIN C
WARE CB, 1995, V121, P1283, DEVELOPMENT
WEIERGRABER O, 1995, V234, P661, EUR J BIOCHEM
WEISSENBACH J, 1980, V77, P7152, P NATL ACAD SCI USA
WELLS JA, 1996, V65, P609, ANN REV BIOCH
WELLS JA, 1996, V93, P1, P NATL ACAD SCI USA
WIJDENES J, 1995, V25, P3474, EUR J IMMUNOL
WIJDENES J, 1991, V28, P1183, MOL IMMUNOL
WILSON IA, 1993, V3, P113, CURR OPIN STRUC BIOL
WLODAVER A, 1992, V309, P59, FEBS LETT
WLODAWER A, 1993, V2, P1373, PROTEIN SCI
WOLF SF, 1991, V146, P3074, J IMMUNOL
XU GY, 1996, V8, P123, J BIOMOL NMR
YAMASAKI K, 1988, V241, P825, SCIENCE
YASUEDA H, 1990, V8, P1036, BIO-TECHNOL
YASUEDA H, 1992, V187, P18, BIOCHEM BIOPH RES CO
YASUKAWA K, 1987, V6, P2939, EMBO J
YASUKAWA K, 1992, V31, P123, IMMUNOL LETT
YASUKAWA K, 1990, V108, P673, J BIOCHEM-TOKYO
YAWATA H, 1993, V12, P1705, EMBO J
YIN T, 1994, V269, P3731, J BIOL CHEM
YIN T, 1993, V151, P2555, J IMMUNOL
YOSHIDA K, 1996, V93, P407, P NATL ACAD SCI USA
YOSHIZAKI K, 1989, V74, P1360, BLOOD
ZDANOV A, 1996, V5, P1955, PROTEIN SCI
ZHANG JG, 1997, V36, P2380, BIOCHEMISTRY-US
ZHANG JG, 1992, V207, P903, EUR J BIOCHEM
ZHANG JG, 1993, V217, P53, EUR J BIOCHEM
ZILBERSTEIN A, 1986, V5, P2529, EMBO J
ZINK T, 1994, V33, P8453, BIOCHEMISTRY-US
ZOHLNHOFER D, 1992, V306, P219, FEBS LETT

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S4       5130   THERAPEUTIC(30N)CRYSTAL?
S5       3491   RD  (unique items)
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S7         238   S5 AND ANTIBOD?
S8           0   S7 AND DT=REV
S9          11   S7 AND DT=REVIEW
? s antibod? crystal?
     S10      15  ANTIBOD? CRYSTAL?
? rd

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>>>Records from unsupported files will be retained in the RD set.
     S11      10  RD  (unique items)
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>>>No matching display code(s) found in file(s): 391

 11/TI/1     (Item 1 from file: 5)
DIALOG(R)File   5:(c) 2006 BIOSIS. All rts. reserv.

Dealing with intractable protein cores: Protein sequencing of the Mcg IgG
  and the Yvo IgM heavy chain variable domains.


 11/TI/2     (Item 2 from file: 5)
DIALOG(R)File   5:(c) 2006 BIOSIS. All rts. reserv.

Preparation, purification and crystallization of antibody Fabs and
  single-chain Fv domains
BOOK TITLE: Immunology Methods Manual, Vol. 1


 11/TI/3     (Item 3 from file: 5)
DIALOG(R)File   5:(c) 2006 BIOSIS. All rts. reserv.

General features of antibody crystal structures


 11/TI/4     (Item 4 from file: 5)
DIALOG(R)File   5:(c) 2006 BIOSIS. All rts. reserv.

Down-regulation of lymphocyte CD4 antigen expression by administration of
  anti-CD4 monoclonal antibody


 11/TI/5     (Item 5 from file: 5)
DIALOG(R)File   5:(c) 2006 BIOSIS. All rts. reserv.

REFINED CRYSTAL STRUCTURE OF A RECOMBINANT IMMUNOGLOBULIN DOMAIN AND A
  COMPLEMENTARITY-DETERMINING REGION 1-GRAFTED MUTANT


 11/TI/6     (Item 1 from file: 34)
DIALOG(R)File  34:(c) 2006 Inst for Sci Info. All rts. reserv.

Title: Structural convergence of antibody binding of carbohydrate
    determinants in Lewis Y tumor antigens


 11/TI/7     (Item 2 from file: 34)
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DIALOG(R)File 34:(c) 2006 Inst for Sci Info. All rts. reserv.

Title: Crystal structures of human antibodies: a detailed and unfinished tapestry of immunoglobulin gene products

11/TI/8 (Item 3 from file: 34)
DIALOG(R)File 34:(c) 2006 Inst for Sci Info. All rts. reserv.

Title: Protein L mutants for the crystallization of antibody fragments

11/TI/9 (Item 4 from file: 34)
DIALOG(R)File 34:(c) 2006 Inst for Sci Info. All rts. reserv.

Title: The liquid protein phase in crystallization: a case study - intact immunoglobulins

11/TI/10 (Item 1 from file: 172)
DIALOG(R)File 172:(c) 2006 Elsevier Science B.V. All rts. reserv.

Crystal structure of a glycosylated Fab from an IgM cryoglobulin with properties of a natural proteolytic antibody
? t s11/full/all

11/9/1 (Item 1 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)
(c) 2006 BIOSIS. All rts. reserv.

0014089320 BIOSIS NO.: 200300046669
Dealing with intractable protein cores: Protein sequencing of the Mcg IgG and the Yvo IgM heavy chain variable domains.
AUTHOR: Shaw Denis C; Shultz Brandon B; Ramsland Paul A; Edmundson Allen B (Reprint)
AUTHOR ADDRESS: Crystallography Program, Oklahoma Medical Research Foundation, 825 NE 13th Street, Oklahoma City, OK, 73104, USA**USA
AUTHOR E-MAIL ADDRESS: Allen-Edmundson@omrf.ouhsc.edu
JOURNAL: Journal of Molecular Recognition 15 (5): p341-348 September-October 2002 2002
MEDIUM: print
ISSN: 0952-3499 _(ISSN print)
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English

ABSTRACT: The VH domains of two human monoclonal antibodies, designated Mcg IgG1(lambda) and Yvo IgM(kappa), were particularly intractable to standard protein sequencing protocols. Peptides liberated from the VH domains of these proteins, using standard enzymatic or chemical cleavages, invariably precipitated during the procedures. Boiling in SDS containing buffers dissolved precipitates and the peptides were separated using SDS-PAGE. Fully overlapped VH sequences were obtained with a series of 'in-gel' cleavages, followed by passive/differential transfers of peptides onto PVDF membranes. Both the in-gel cleavages and passive transfers could be applied to 'wet' or 'dry' gels so that gels could be archived and used at a later date to obtain additional sequence information from a fragment of interest. Repetitive yields of even the

most insoluble peptides were such that the sequences of various peptides from relatively complex mixtures of peptides could be assigned with confidence. Despite the overall success of the sequencing, we occasionally referred to electron density maps, calculated for crystals of the Fab of Yvo IgM, to resolve particular sequences and confirm ambiguous amino acid assignments. Methods we describe in this report should be generally useful for obtaining sequences of proteins with intractable cores and may find many applications in the 'post genomic era'.

DESCRIPTORS:
MAJOR CONCEPTS: Biochemistry and Molecular Biophysics
CHEMICALS & BIOCHEMICALS: intractable protein cores; Mcg IgG--heavy chain variable domains; Yvo IgM heavy chain--variable domains; insoluble peptides; human monoclonal antibodies
METHODS & EQUIPMENT: protein sequencing--genetic techniques, laboratory techniques; **antibody crystallography** --laboratory techniques
MISCELLANEOUS TERMS: electron density maps
CONCEPT CODES:
10060 Biochemistry studies - General
10064 Biochemistry studies - Proteins, peptides and amino acids

11/9/2 (Item 2 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

0011618791 BIOSIS NO.: 199800413038
Preparation, purification and crystallization of antibody Fabs and single-chain Fv domains
BOOK TITLE: Immunology Methods Manual, Vol. 1
AUTHOR: Sharma Sadhana (Reprint); Rose David R
BOOK AUTHOR/EDITOR: Lefkovits I (Editor)
AUTHOR ADDRESS: Div. Mol. Struct. Biol., Ont. Cancer Inst., Univ. Toronto, Toronto, ON, Canada**Canada
p15-37 1997
MEDIUM: print
BOOK PUBLISHER: Academic Press, Inc., 1250 Sixth Ave., San Diego, California 92101, USA
Academic Press Ltd., 14 Belgrave Square, 24-28 Oval Road, London NW1 70X, England, UK
ISBN: 0-12-442711-1
DOCUMENT TYPE: Book; Book Chapter
RECORD TYPE: Citation
LANGUAGE: English
DESCRIPTORS:
MAJOR CONCEPTS: Biochemistry and Molecular Biophysics; Immune System--Chemical Coordination and Homeostasis; Methods and Techniques
CHEMICALS & BIOCHEMICALS: antibody--antigen-binding fragment domain, crystallization, purification, single chain variable fragment domain, preparation
METHODS & EQUIPMENT: **antibody crystallization** --chemical modification, protocol, synthetic method; antibody purification: Isolation/Purification Techniques--CB, protocol, purification method; antibody single chain variable fragment domain preparation--protocol, sample preparation method, specimen preparation techniques; enzymatic antibody-binding fragment production--Synthesis/Modification Techniques , synthetic method, protocol; scFv gene purification: Isolation/Purification Techniques--CB, protocol, purification method

MISCELLANEOUS TERMS: antigen-antibody interaction; Book Chapter
CONCEPT CODES:
10054 Biochemistry methods - Proteins, peptides and amino acids
10504 Biophysics - Methods and techniques
10506 Biophysics - Molecular properties and macromolecules
34502 Immunology - General and methods

11/9/3 (Item 3 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

0010804188 BIOSIS NO.: 199799438248
General features of antibody crystal structures
AUTHOR: Davies David R; Chacko Susan; Cohen Gerson H
AUTHOR ADDRESS: Lab. Molecular Biol., NIDDK, Natl. Inst. Health, Bethesda, MD 20892, USA**USA
JOURNAL: Immunotechnology (Amsterdam) 2 (4): p261 1996 1996
CONFERENCE/MEETING: 1996 Keystone Meeting on Exploring and Exploiting Antibody and Ig Superfamily Combining Sites Taos, New Mexico, USA February 22-28, 1996; 19960222
ISSN: 1380-2933
DOCUMENT TYPE: Meeting; Meeting Abstract
RECORD TYPE: Citation
LANGUAGE: English
DESCRIPTORS:
MAJOR CONCEPTS: Genetics; Immune System--Chemical Coordination and Homeostasis
MISCELLANEOUS TERMS: **ANTIBODY CRYSTAL STRUCTURES** ; ANTIBODY:PROTEIN:ANTIGEN COMPLEX; BINDING; FAB FRAGMENTS; FC FRAGMENTS; IGG; IMMUNE SYSTEM; IMMUNOGLOBULIN G; MUTATION SITE; Meeting Abstract
CONCEPT CODES:
00520 General biology - Symposia, transactions and proceedings
03502 Genetics - General
34502 Immunology - General and methods

11/9/4 (Item 4 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

0008702527 BIOSIS NO.: 199395004793
Down-regulation of lymphocyte CD4 antigen expression by administration of anti-CD4 monoclonal antibody
AUTHOR: Morel P (Reprint); Nicolas J F; Wijdenes J; Revillard J P (Reprint)
AUTHOR ADDRESS: Immunol. Lab., INSERM U80, CNRS URA, 1177 Lyon, France** France
JOURNAL: Clinical Immunology and Immunopathology 64 (3): p248-253 1992
ISSN: 0090-1229
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English

ABSTRACT: Modulation of surface CD4 antigen expression was assessed by flow cytometry after calibration with 125I-labeled anti-CD4 monoclonal antibodies (mAbs). Three patients with severe psoriasis treated with BB14 (anti-CD4 mouse IgG1) and five patients with rheumatoid arthritis treated with BL4 (anti-CD4 mouse IgG2a) were analyzed for sequential changes in surface CD4 expression on CD4+ blood lymphocytes. Anti-CD4 mAb treatment

induced a decrease of 50 to 80% of CD4 expression, with slow and partial recovery after cessation of mAb administration. CD4 modulation was related to mAb dosage and mAb concentration in plasma. It was achieved at nonsaturating concentration. In vitro incubation of blood monuclear cells induced CD4 modulation of similar kinetics and magnitude, associated with decrease of 5-10% of CD3 expression. CD4 modulation required both an intact Fc part of the antibody and the presence of monocytes. The possible role of CD4 modulation should be considered along with other functional activities of anti-CD4 mAbs in analyzing the mechanisms of the clinical effects of these antibodies.

REGISTRY NUMBERS: 7553-56-2: IODINE
DESCRIPTORS:
MAJOR CONCEPTS: Biochemistry and Molecular Biophysics; Blood and Lymphatics--Transport and Circulation; Cell Biology; Clinical Endocrinology--Human Medicine, Medical Sciences; Dermatology--Human Medicine, Medical Sciences; Immune System--Chemical Coordination and Homeostasis; Pathology; Skeletal System--Movement and Support
BIOSYSTEMATIC NAMES: Hominidae--Primates, Mammalia, Vertebrata, Chordata, Animalia
ORGANISMS: human (Hominidae)
COMMON TAXONOMIC TERMS: Animals; Chordates; Humans; Mammals; Primates; Vertebrates
CHEMICALS & BIOCHEMICALS: IODINE
MISCELLANEOUS TERMS: ANTI-CD4 MOUSE IMMUNOGLOBULIN G1; ANTI-CD4 MOUSE IMMUNOGLOBULIN G2A; **ANTIBODY CRYSTALLIZABLE FRAGMENT** ; BLOOD MONONUCLEAR CELL; FLOW CYTOMETRY; IN-VITRO; IODINE RADIOISOTOPE; PSORIASIS; RHEUMATOID ARTHRITIS
CONCEPT CODES:
02508 Cytology - Human
06504 Radiation biology - Radiation and isotope techniques
10064 Biochemistry studies - Proteins, peptides and amino acids
10068 Biochemistry studies - Carbohydrates
10504 Biophysics - Methods and techniques
10506 Biophysics - Molecular properties and macromolecules
12508 Pathology - Inflammation and inflammatory disease
15002 Blood - Blood and lymph studies
15004 Blood - Blood cell studies
15008 Blood - Lymphatic tissue and reticuloendothelial system
18006 Bones, joints, fasciae, connective and adipose tissue - Pathology
18506 Integumentary system - Pathology
22003 Pharmacology - Drug metabolism and metabolic stimulators
22005 Pharmacology - Clinical pharmacology
22018 Pharmacology - Immunological processes and allergy
32600 In vitro cellular and subcellular studies
34502 Immunology - General and methods
34508 Immunology - Immunopathology, tissue immunology
BIOSYSTEMATIC CODES:
86215 Hominidae

11/9/5 (Item 5 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

0008359821 BIOSIS NO.: 199294061662
REFINED CRYSTAL STRUCTURE OF A RECOMBINANT IMMUNOGLOBULIN DOMAIN AND A COMPLEMENTARITY-DETERMINING REGION 1-GRAFTED MUTANT
AUTHOR: STEIPE B (Reprint); PLUECKTHUN A; HUBER R

AUTHOR ADDRESS: ABT STRUKTURFORSCHUNG, MAX-PLANCK-INST BIOCHEMIE, AM KLOPFERSPITZ, 8033 MARTINSREID, GER**GERMANY
JOURNAL: Journal of Molecular Biology 225 (3): p739-753 1992
ISSN: 0022-2836
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: ENGLISH

ABSTRACT: We report the solution of the crystal structure of a mutant of the immunoglobulin VL domain of the antibody McPC603, in which the complementarity-determining region 1 segment is replaced with that of a different antibody. The wild-type and mutant crystal structures have been refined to a crystallographic R-factor of 14.9% at a nominal resolution of 1.97 .ANG.. A detailed description of the structures is given. Crystal packing results in a dimeric association of domains, in a fashion closely resembling that of an Fv fragment. The comparison of this VL domain with the same domain in the Fab fragment of McPC603 shows that the structure of an immunoglobulin VL domain is largely independent of its mode of association, even in places where the inter-subunit contacts are not conserved between VL and VH. In all three complementarity-determining regions we observe conformations that would not have been predicted by the canonical structure hypothesis. Significant differences between the VL domain dimer and the Fab fragment in the third complementarity-determining region show that knowledge of the structure of the dimerization partner and its exact mode of association may be needed to predict the precise conformation of antigen-binding loops.

DESCRIPTORS: **ANTIBODY CRYSTALLOGRAPHY FV FRAGMENT FAB FRAGMENT ANTIGEN-BINDING LOOPS**
DESCRIPTORS:
MAJOR CONCEPTS: Biochemistry and Molecular Biophysics; Genetics; Immune System--Chemical Coordination and Homeostasis; Metabolism; Molecular Genetics--Biochemistry and Molecular Biophysics
CONCEPT CODES:
03506 Genetics - Animal
03508 Genetics - Human
10010 Comparative biochemistry
10052 Biochemistry methods - Nucleic acids, purines and pyrimidines
10054 Biochemistry methods - Proteins, peptides and amino acids
10058 Biochemistry methods - Carbohydrates
10062 Biochemistry studies - Nucleic acids, purines and pyrimidines
10064 Biochemistry studies - Proteins, peptides and amino acids
10068 Biochemistry studies - Carbohydrates
10300 Replication, transcription, translation
10506 Biophysics - Molecular properties and macromolecules
13002 Metabolism - General metabolism and metabolic pathways
13004 Metabolism - Carbohydrates
13012 Metabolism - Proteins, peptides and amino acids
13014 Metabolism - Nucleic acids, purines and pyrimidines
15002 Blood - Blood and lymph studies
15008 Blood - Lymphatic tissue and reticuloendothelial system
34502 Immunology - General and methods
34508 Immunology - Immunopathology, tissue immunology

12976304 Genuine Article#: 838SU Number of References: 45

Title: Structural convergence of antibody binding of carbohydrate determinants in Lewis Y tumor antigens

Author(s): Ramsland PA (REPRINT) ; Farrugia W; Bradford TM; Hogarth PM; Scott AM

Corporate Source: Austin Res Inst,Struct Immunol Lab,Heidelberg/Vic 3084/Australia/ (REPRINT); Austin Res Inst,Struct Immunol Lab,Heidelberg/Vic 3084/Australia/; Ludwig Inst Canc Res,Tumour Targeting Program,Heidelberg/Vic 3084/Australia/(p.ramsland@ari.unimelb.edu.au)

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Journal Subject Category: BIOCHEMISTRY & MOLECULAR BIOLOGY

Abstract: Antibodies targeting human epithelial carcinomas bearing Lewis Y (Le(y)) carbohydrate antigens provide a striking illustration of convergent immune recognition. We report a 1.9 Angstrom resolution crystal structure of the Fab of a humanized antibody (hu3S193) in complex with the Ley tetrasaccharide, Fuc(alpha1 --> 2)Gal(beta1 --> 4)[Fuc(alpha1 --> 3)]GlcNAc. Comparisons of the hu3S193 and BR96 antibodies bound to Ley tumor antigens revealed extremely similar mechanisms for recognition of the carbohydrate epitopes. Solvent plays a critical role in hu3S193 antibody binding to the Ley carbohydrate epitope. Specificity for Ley is maintained because a conserved pocket accepts an N-acetyl group of the core Gal(beta1 --> 4)GlcNAc disaccharide. Closely related blood-group determinants (Le(a) and Le(b)) cannot enter the specificity pocket, making the Ley antibodies promising candidates for immunotherapy of epithelial cancer. (C)2004 Elsevier Ltd. All rights reserved.

Descriptors--Author Keywords: **antibody crystallography** ; cancer treatments ; carbohydrate antigens ; humanized antibody ; tumor targeting

Identifiers--KeyWord Plus(R): 3-DIMENSIONAL STRUCTURE; MONOCLONAL-ANTIBODIES; FAB FRAGMENT; COMPLEX; BLOOD; RECOGNITION; EXPRESSION; CANCER; CRYSTALLOGRAPHY; SPECIFICITY

Cited References:

BEDZYK WD, 1990, V265, P133, J BIOL CHEM
BHAT TN, 1984, V17, P244, J APPL CRYSTALLOGR
BLASZCZYKTHURIN M, 1996, V9, P447, PROTEIN ENG
BRADEN BC, 1994, V243, P767, J MOL BIOL
BRUNGER AT, 1998, V54, P905, ACTA CRYSTALLOGR D 5
BUNGARD S, 1998, V46, P213, CANCER IMMUNOL IMMUN
CLARKE K, 2000, V6, P3621, CLIN CANCER RES
CLARK GL, 2000, V3, P7, ETHICS PLACE ENV
COHEN GH, 1996, V52, P315, ACTA CRYSTALLOGR D 2
CONNOLLY ML, 1983, V16, P548, J APPL CRYSTALLOGR
CYGLER M, 1991, V253, P442, SCIENCE
CYGLER M, 1994, V145, P36, RES IMMUNOL
DAVIES DR, 1990, V59, P439, ANNU REV BIOCHEM
DELBAERE LTJ, 1993, V230, P950, J MOL BIOL
FISCHMANN TO, 1991, V266, P12915, J BIOL CHEM
GLENNIE MJ, 2003, V8, P503, DRUG DISCOV TODAY
GUDDAT LW, 2000, V302, P853, J MOL BIOL
GURA T, 2002, V417, P584, NATURE
HELLSTROM I, 1990, V50, P2183, CANCER RES
HERRON JN, 1989, V5, P271, PROTEINS

HOFFMAN EW, 2001, P ASCO 37 ANN M 2634
INAGAKI H, 1990, V44, P208, J SURG ONCOL
JEFFREY PD, 1995, V2, P466, NAT STRUCT BIOL
KABAT EA, 1991, SEQUENCES PROTEINS I
KITAMURA K, 1994, V91, P12957, P NATL ACAD SCI USA
KORADI R, 1996, V14, P51, J MOL GRAPHICS
LASKOWSKI RA, 1993, V26, P283, J APPL CRYSTALLOGR
MIZUTANI R, 1995, V254, P208, J MOL BIOL
MURATA K, 1992, V98, P67, AM J CLIN PATHOL
NAVAZA J, 1994, V50, P157, ACTA CRYSTALLOGR A
OTWINOWSKI Z, 1997, V276, P307, METHOD ENZYMOL
PADLAN EA, 1989, V86, P5938, P NATL ACAD SCI USA
RAMSLAND PA, 2001, V4, P397, COMB CHEM HIGH T SCR
RAMSLAND PA, 2003, V49, P307, CELL MOL BIOL
ROSS J, 2003, V3, P107, EXPERT REV ANTICANCE
SAKAMOTO J, 1986, V46, P1553, CANCER RES
SCOTT AM, 2000, V60, P3254, CANCER RES
SCOTT AM, 1997, V9, P717, CURR OPIN IMMUNOL
SHERIFF S, 1987, V84, P8075, P NATL ACAD SCI USA
STEPLEWSKI Z, 1991, V5, P79, IN VIVO
THOMAS R, 2002, V277, P2059, J BIOL CHEM
VANDENEYNDE B, 1998, P2424, ENCY IMMUNOLOGY
WILSON IA, 1994, V4, P857, CURR OPIN STRUC BIOL
YELTON DE, 1995, V155, P1994, J IMMUNOL
YIN BWT, 1996, V65, P406, INT J CANCER

11/9/7 (Item 2 from file: 34)

DIALOG(R)File 34:SciSearch(R) Cited Ref Sci

11205616 Genuine Article#: 619JK Number of References: 102
Title: Crystal structures of human antibodies: a detailed and unfinished tapestry of immunoglobulin gene products
Author(s): Ramsland PA (REPRINT) ; Farrugia W
Corporate Source: Austin Res Inst,Struct Biol Lab,Kronheimer Bldg A&MRC,Studley Rd/Heidelberg/Vic 3084/Australia/ (REPRINT); Austin Res Inst,Struct Biol Lab,Heidelberg/Vic 3084/Australia/
Journal: JOURNAL OF MOLECULAR RECOGNITION, 2002, V15, N5 (SEP-OCT), P 248-259
ISSN: 0952-3499 Publication date: 20020900
Publisher: JOHN WILEY & SONS LTD, BAFFINS LANE CHICHESTER, W SUSSEX PO19 1UD, ENGLAND
Language: English Document Type: REVIEW
Geographic Location: Australia
Journal Subject Category: BIOCHEMISTRY & MOLECULAR BIOLOGY; BIOPHYSICS
Abstract: Sequencing of all human immunoglobulin (Ig) germline gene segments has recently been completed. However, our first glimpses of the recombined products of this combinatorial gene system were in the 1970s, in landmark publications, reporting the crystal structures of two human myeloma proteins, the Meg lambda light chain dimer and the New IgG1(lambda) Fab. Although numerous crystal structures of marine and human antibodies have now been determined, only a relatively small proportion of the human germline genes have had their corresponding protein three-dimensional structures resolved. Therefore, further structural investigations are required before the inherent diversity of the antibody repertoire can be fatly appreciated. We discuss the detailed structural information available for human antibodies with regard to their immune functions. Also discussed, is how the structural

information is finding application in the 'humanization' of murine antibodies as part of their development as 'biopharmaceuticals' for the treatment of human disease. Copyright (C) 2002 John Wiley Sons, Ltd.

Descriptors--Author Keywords: **antibody crystallography** ; antibody engineering ; antibody structure ; humanization ; human antibodies

Identifiers--KeyWord Plus(R): IMMUNODEFICIENCY-VIRUS TYPE-1; INTACT HUMAN-IMMUNOGLOBULIN; CD3 MONOCLONAL-ANTIBODY; BENCE-JONES PROTEIN; HUMAN-IGM ANTIBODY; 3-DIMENSIONAL STRUCTURE; FAB FRAGMENT; LAMBDA-TYPE; 2.8-A RESOLUTION; VARIABLE DOMAIN

Cited References:

ALLAZIKANI B, 1997, V273, P927, J MOL BIOL
ALTSCHUH D, 1992, V256, P92, SCIENCE
AMIT AG, 1986, V233, P747, SCIENCE
BOLT S, 1993, V23, P403, EUR J IMMUNOL
BOULIANNE GL, 1984, V312, P643, NATURE
BOYD PN, 1995, V32, P1311, MOL IMMUNOL
BROWN M, 2000, V191, P2101, J EXP MED
BRUGGEMANN M, 1989, V170, P2153, J EXP MED
BRUGGEMANN M, 1991, V21, P1323, EUR J IMMUNOL
CAUERHFF A, 2000, V165, P6422, J IMMUNOL
CHACKO S, 1996, V271, P12191, J BIOL CHEM
CHOTHIA C, 1992, V227, P799, J MOL BIOL
CLACKSON T, 1991, V352, P624, NATURE
CLARK M, 2000, V21, P397, IMMUNOL TODAY
CO MS, 1991, V88, P2869, P NATL ACAD SCI USA
COLMAN PM, 1987, V326, P358, NATURE
CORPER AL, 1997, V4, P374, NAT STRUCT BIOL
DEISENHOFER J, 1976, V357, P1421, H-S Z PHYSIOL CHEM
DEUTSCH HF, 1971, V190, P472, ANN NY ACAD SCI
EDMUNDSON AB, 1971, V36, P427, COLD SPRING HARB SYM
EDMUNDSON AB, 1995, V1, P41, ANTIBODIES
EDMUNDSON AB, 1996, V9, P542, METHODS
EDMUNDSON AB, 1975, V14, P3953, BIOCHEMISTRY-US
EDMUNDSON AB, 1970, V245, P2763, J BIOL CHEM
EDMUNDSON AB, 1974, V1, P103, PROGR IMMUNOLOGY 2
EDMUNDSON AB, 1974, V13, P3816, BIOCHEMISTRY-US
ELY KR, 1978, V17, P820, BIOCHEMISTRY-US
ELY KR, 1989, V210, P601, J MOL BIOL
FABER C, 1998, V3, P253, IMMUNOTECHNOLOGY
FAN ZC, 1992, V228, P188, J MOL BIOL
FAN ZC, 1999, V12, P19, J MOL RECOGNIT
FEINSTEIN A, 1965, V205, P147, NATURE
FETT JW, 1973, V10, P115, IMMUNOCHEMISTRY
FOOTE J, 1992, V224, P487, J MOL BIOL
FUREY W, 1983, V167, P661, J MOL BIOL
GRAILLE M, 2000, V97, P5399, P NATL ACAD SCI USA
GREEN LL, 1994, V7, P13, NAT GENET
GUDDAT LW, 1994, V236, P247, J MOL BIOL
GUDDAT LW, 2000, V302, P853, J MOL BIOL
GUDDAT LW, 1993, V90, P4271, P NATL ACAD SCI USA
HARRIS LJ, 1998, V275, P861, J MOL BIOL
HARRIS LJ, 1992, V360, P369, NATURE
HE XM, 1992, V89, P7154, P NATL ACAD SCI USA
HERRON JN, 1991, V11, P159, PROTEINS
HSU E, 1992, V2, P422, CURR OPIN STRUC BIOL
HUANG DB, 1997, V34, P1291, MOL IMMUNOL
HUANG DB, 1996, V93, P7017, P NATL ACAD SCI USA
HUNKAPILLER T, 1989, V44, P1, ADV IMMUNOL
JONES PT, 1986, V321, P522, NATURE

KABAT EA, 1991, SEQUENCES PROTEINS I
KLEIN M, 1981, V78, P524, P NATL ACAD SCI-BIOL
KOHLER G, 1975, V256, P495, NATURE
KORADI R, 1996, V14, P51, J MOL GRAPHICS
KRATZIN HD, 1989, V370, P263, BIOL CHEM H-S
KWONG PD, 1998, V393, P648, NATURE
MARCHALONIS JJ, 1989, V3, P2469, FASEB J
MARQUART M, 1980, V141, P369, J MOL BIOL
MCCAFFERTY J, 1990, V348, P552, NATURE
MELTZER M, 1966, V40, P828, AM J MED
MENDEZ MJ, 1997, V15, P146, NAT GENET
MORRISON SL, 1984, V81, P6851, P NATL ACAD SCI USA
NEWKIRK MM, 1987, V6, P453, HYBRIDOMA
NEZLIN R, 1998, IMMUNOGLOBULINS STRU
NEZLIN R, 1990, V48, P1, ADV IMMUNOL
NILSON BHK, 1992, V267, P2234, J BIOL CHEM
NOELKEN ME, 1965, V240, P218, J BIOL CHEM
PADLAN EA, 1994, V31, P169, MOL IMMUNOL
PEROSA F, 1997, V203, P153, J IMMUNOL METHODS
POKKULURI PR, 1999, V6, P165, AMYLOID
POLJAK RJ, 1973, V70, P3305, P NATL ACAD SCI USA
POLJAK RJ, 1974, V71, P3440, P NATL ACAD SCI USA
QI M, 1992, V149, P2345, J IMMUNOL
RADAEV S, 2001, V276, P16469, J BIOL CHEM
RAJAN SS, 1983, V20, P787, MOL IMMUNOL
RAMSLAND PA, 2001, V232, P204, J CRYST GROWTH
RAMSLAND PA, 2001, V18, P176, EXP CLIN IMMUNOGENET
RAMSLAND PA, 2000, V37, P295, MOL IMMUNOL
RIECHMANN L, 1988, V332, P323, NATURE
RINI JM, 1993, V90, P6325, P NATL ACAD SCI USA
ROUTLEDGE EG, 1995, V60, P847, TRANSPLANTATION
RUIZ M, 2002, V53, P857, IMMUNOGENETICS
RUIZ M, 2000, V28, P219, NUCLEIC ACIDS RES
SAPHIRE EO, 2001, V57, P168, ACTA CRYSTALLOGR D 1
SAPHIRE EO, 2001, V293, P1155, SCIENCE
SCHIFFER M, 1973, V12, P4620, BIOCHEMISTRY-US
SCHIFFER M, 1970, V245, P728, J BIOL CHEM
SEGAL DM, 1974, V71, P4298, P NATL ACAD SCI USA
SHAN L, 1993, V126, P229, J CRYST GROWTH
SHERIFF S, 1987, V84, P8075, P NATL ACAD SCI USA
SHIRAI T, 1996, V3, P1, OPT REV
SILVERTON EW, 1977, V74, P5140, P NATL ACAD SCI USA
SODERLIND E, 1992, V130, P109, IMMUNOL REV
SODERLIND E, 2001, V4, P409, COMB CHEM HIGH T SCR
SOHI MK, 1996, V88, P636, IMMUNOLOGY
SOHI MK, 1994, V242, P706, J MOL BIOL
SPIEGEL PC, 2001, V98, P13, BLOOD
STANFIELD RL, 1990, V248, P712, SCIENCE
TRAMONTANO A, 1990, V215, P175, J MOL BIOL
VANDIJK MA, 2001, V5, P368, CURR OPIN CHEM BIOL
VAUGHAN TJ, 1998, V16, P535, NAT BIOTECHNOL
WEBER RJ, 1981, V127, P300, J IMMUNOL
WINTER G, 1991, V349, P293, NATURE

11/9/8 (Item 3 from file: 34)

11024085 Genuine Article#: 597YH Number of References: 19
Title: Protein L mutants for the crystallization of antibody fragments
Author(s): Stura EA (REPRINT) ; Graille M; Housden NG; Gore MG
Corporate Source: Ctr Etud Saclay,CEA, Dept Ingn & Etud Prot,F-91191 Gif Sur Yvette//France/ (REPRINT); Ctr Etud Saclay,CEA, Dept Ingn & Etud Prot,F-91191 Gif Sur Yvette//France/; Univ Southampton,Inst Biomol Sci, Dept Biochem,Southampton SO16 7PX/Hants/England/
Journal: ACTA CRYSTALLOGRAPHICA SECTION D-BIOLOGICAL CRYSTALLOGRAPHY, 2002 , V58, 10,1 (OCT), P1744-1748
ISSN: 0907-4449 Publication date: 20021000
Publisher: BLACKWELL MUNKSGAARD, 35 NORRE SOGADE, PO BOX 2148, DK-1016 COPENHAGEN, DENMARK
Language: English Document Type: ARTICLE
Geographic Location: France; England
Journal Subject Category: BIOCHEMICAL RESEARCH METHODS; BIOCHEMISTRY & MOLECULAR BIOLOGY; BIOPHYSICS; CRYSTALLOGRAPHY
Abstract: In many cases, antibody and their complexes can be crystallized and their structure determined without major difficulties. The remaining problematic cases may be approached through techniques such as of combinatorial complex crystallization which uses immunoglobulin binding proteins (IBP). The range of lattices that can be made using this method can be expanded by engineering mutants of IBP domains. We have designed Peptostreptococcus magnus protein L (PpL) mutants with altered immunoglobulin light chain binding characteristics. While the wild type PpL has two binding sites, some of the mutants contact the light chain via only one site. Other mutants have combinations of weakened first and second binding sites that modify their crystallization properties and their packing mode. In this study, we have selected PpL mutants with different behavior and that are most useful for crystallization and we present the various packing modes obtained so far.
Descriptors--Author Keywords: **antibody crystallization** ; immunoglobulin binding protein ; crystal engineering ; protein L mutants
Identifiers--KeyWord Plus(R): PEPTOSTREPTOCOCCUS-MAGNUS; MACROMOLECULAR COMPLEXES; FAB FRAGMENT; ANTIGEN; RECOGNITION; DOMAIN
Cited References:
AREVALO JH, 1993, V231, P103, J MOL BIOL
BECKINGHAM JA, 2001, V353, P395, BIOCHEM J 2
BRUNGER AT, 1998, V54, P905, ACTA CRYSTALLOGR D 5
DERRICK JP, 1999, V55, P314, ACTA CRYSTALLOGR D 1
GRAILLE M, 2001, V9, P679, STRUCTURE
GRAILLE M, 2000, V97, P5399, P NATL ACAD SCI USA
JOLIVETREYNAUD C, 1998, V56, P300, J MED VIROL
MCREE DE, 1999, V125, P156, J STRUCT BIOL
NAVAZA J, 1994, V50, P157, ACTA CRYSTALLOGR A
OTWINOWSKI Z, 1997, V276, P307, METHOD ENZYMOL
RINI JM, 1992, V255, P959, SCIENCE
ROUSSEL A, 1989, P77, SILICON GRAPHICS GEO
SHERIFF S, 1996, V259, P938, J MOL BIOL
STURA EA, 2001, V232, P573, J CRYST GROWTH
STURA EA, 2001, V232, P580, J CRYST GROWTH
STURA EA, 2001, V232, P545, J CRYST GROWTH
STURA EA, 1999, P177, CRYSTALLIZATION NUCL
STURA EA, 2002, V58, P1740, ACTA CRYSTALLOGR 10
STURA EA, 2002, V58, P1715, ACTA CRYSTALLOGR 10

11/9/9 (Item 4 from file: 34)
DIALOG(R)File 34:SciSearch(R) Cited Ref Sci

10007523 Genuine Article#: 473KL Number of References: 27
Title: The liquid protein phase in crystallization: a case study - intact immunoglobulins
Author(s): Kuznetsov YG; Malkin AJ; McPherson A (REPRINT)
Corporate Source: Univ Calif Irvine,Dept Mol Biol & Biochem,Irvine//CA/92697 (REPRINT); Univ Calif Irvine,Dept Mol Biol & Biochem,Irvine//CA/92697
Journal: JOURNAL OF CRYSTAL GROWTH, 2001, V232, N1-4 (NOV), P30-39
ISSN: 0022-0248 Publication date: 20011100
Publisher: ELSEVIER SCIENCE BV, PO BOX 211, 1000 AE AMSTERDAM, NETHERLANDS
Language: English Document Type: ARTICLE
Geographic Location: USA
Journal Subject Category: CRYSTALLOGRAPHY
Abstract: A common observation by protein chemists has been the appearance, for many proteins in aqueous solutions, of oil like droplets, or in more extreme cases the formation of a second oil like phase. These may accompany the formation of precipitate in "salting out" or "salting in' procedures, but more commonly appear in place of any precipitate. Such phase separations also occur, with even greater frequency, in the presence of polymeric precipitants such as polyethyleneglycol (PEG). In general the appearance of a second liquid phase has been taken as indicative of protein aggregation, though an aggregate state distinctly different from that characteristic of amorphous precipitate. While the latter is thought to be composed of linear and branched assemblies, polymers of a sort, the oil phase suggests a more compact, three-dimensional, but fluid state. An important property of an alternate, fluid phase is that it can mediate transitions between other states, for example, between protein molecules free in solution and protein molecules immobilized in amorphous precipitate or crystals. The "liquid protein" phase can be readily observed in many crystallization experiments either prior to the appearance of visible crystals, or directly participating in the crystal growth process. In some cases the relationship between the liquid phase and developing crystals is intimate. Crystals grow directly from the liquid phase, or appear only after the visible formation of the liquid phase. We describe here our experience with a class of macromolecules, immunoglobulins, and particularly IDEC-151, an IgG specific for CD4 on human lymphocytes. This protein has been crystallized from a Jeffamine-LiSO4 mother liquor and, its crystallization illustrates many of the features associated with the liquid protein, or protein rich phase. (C) 2001 Elsevier Science B.V. All rights reserved.
Descriptors--Author Keywords: phase transitions ; nucleation ; **antibody crystals** ; proteins
Identifiers--KeyWord Plus(R): ATOMIC-FORCE-MICROSCOPY; LIGHT-SCATTERING INVESTIGATIONS; HIGH SALT CONCENTRATION; MACROMOLECULAR CRYSTALS; MONOCLONAL-ANTIBODY; POLYETHYLENE-GLYCOL; SURFACE-MORPHOLOGY; DEFECT STRUCTURE; GROWTH-KINETICS; VIRUS CRYSTALS
Cited References:
ANDERSON D, 1997, V84, P73, CLIN IMMUNOL IMMUNOP
BROID ML, 1995, V53, P6325, PHYS REV E
BROIDE ML, 1991, V88, P5660, P NATL ACAD SCI USA
BURTON DR, 1992, V51, P1, ADV IMMUNOL
BURTON DR, 1990, V15, P64, TRENDS BIOCHEM SCI
GEORGALIS Y, 1993, V126, P245, J CRYST GROWTH
HARRIS LJ, 1997, V36, P1581, BIOCHEMISTRY-US
HARRIS LJ, 1995, V23, P285, PROTEINS
HARRIS LJ, 1998, V275, P861, J MOL BIOL

KUZNETSOV YG, 1998, V58, P6097, PHYS REV B
KUZNETSOV YG, 1999, V196, P489, J CRYST GROWTH
MALKIN AJ, 1999, V196, P471, J CRYST GROWTH
MALKIN AJ, 1996, V117, P124, J STRUCT BIOL
MALKIN AJ, 1995, V2, P956, NAT STRUCT BIOL
MALKIN AJ, 1993, V128, P1232, J CRYST GROWTH
MALKIN AJ, 1997, V393, P95, SURF SCI
MALKIN AJ, 1996, V24, P247, PROTEINS
MALKIN AJ, 1996, V100, P11736, J PHYS CHEM-US
MALKIN A, 1994, V50, P385, ACTA CRYSTALLOGR D
MCPHERSON, 1998, CRYSTALLIZATION BIOL
MORRIS DW, 1989, V7, P522, BIOTECHNIQUES
MUSCHOL M, 1997, V107, P1953, J CHEM PHYS
NEWMAN R, 1992, V10, P1455, BIO-TECHNOL
NIIMURA N, 1994, V137, P671, J CRYST GROWTH
RAY WJ, 1986, V76, P562, J CRYST GROWTH
RAY WJ, 1986, V261, P11544, J BIOL CHEM
RAY WJ, 1992, V14, P300, PROTEINS

11/9/10 (Item 1 from file: 172)

04636679 EMBASE No: 2006211487

Crystal structure of a glycosylated Fab from an IgM cryoglobulin with properties of a natural proteolytic antibody

Ramsland P.A.; Terzyan S.S.; Cloud G.; Bourne C.R.; Farrugia W.; Tribbick G.; Geysen H.M.; Moomaw C.R.; Slaughter C.A.; Edmundson A.B.
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Biochemical Journal (United Kingdom) 2006 VOL/ISS/PG: 395/3 (473-481)
CODEN: BIJOA ISSN: 0264-6021
PUBLICATION DATE: 20060501
DOCUMENT TYPE: Article
NUMBER OF REFERENCES: 48
LANGUAGES: ENGLISH SUMMARY LANGUAGES: ENGLISH

The 2.6 A (1 A = 0.1 nm) resolution structure has been determined for the glycosylated Fab (fragment antigen binding) of an IgM (Yvo) obtained from a subject with Waldenstrom's macroglobulinaemia. Dynamic light scattering was used to estimate the gel point and monitor the formation of an ordered hydroscopic gel of Yvo IgM upon cooling. If a cryoglobulin forms gels in peripheral tissues and organs, the associated swelling and damage to microvasculature can result in considerable morbidity and mortality. The three-dimensional structure of the branched N-linked oligosaccharide associated with the CH1 domain (first constant domain of heavy chain) is reported. The carbohydrate may act to shield part of the lateral surface of the CH1 domain and crowd the junction between the CH1 and CH2 domains, thereby limiting the segmental flexibility of the Fab arms in intact Yvo IgM, especially at low temperatures. Recently, Yvo IgM was shown to have the properties of a naturally occurring proteolytic antibody [Paul, Karle, Planque, Taguchi, Salas, Nishiyama, Handy, Hunter, Edmundson and Hanson (2004) J. Biol. Chem. 279, 39611-39619; Planque, Bangale, Song, Karle, Taguchi, Poindexter, Bick, Edmundson, Nishiyama and Paul (2004) J. Biol Chem. 279, 14024-14032]. The Yvo protein displayed the ability to cleave, by a nucleophilic mechanism, the amide bonds of a variety of serine

protease substrates and the gp120 coat protein of HIV. An atypical serine, arginine and glutamate motif is located in the middle of the Yvo antigen-binding site and displays an overall geometry that mimics the classical serine, histidine and aspartate catalytic triad of serine proteases. Our present findings indicate that pre-existing or natural antibodies can utilize at least one novel strategy for the cleavage of peptide bonds. (c) 2006 Biochemical Society.

AUTHOR KEYWORDS: **Antibody crystallography** ; Combinatorial peptide chemistry; Cryoglobulin; Glycoprotein; IgM; Natural proteolytic antibody

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